

APPENDIX C

QAULITY ASSURANCE/QUALITY CONTROL REPORTS

Previously submitted reports not included and are available upon request.

DATA QUALITY ASSURANCE REVIEW

Richardson Flat Tailings Site Operable Units 2 and 3

Park City, Utah

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1. SUMMARY

This is the fourth data quality review for sampling data collected at Richardson Flat Tailings Site Operable Units 2 and 3 (OUs 2 & 3) in Park City, Utah. This report evaluates benthic macro-invertebrate tissue, fish tissue, sediment, shallow groundwater, soil, surface water, tailings, and vegetation tissue data collected from July through October 2015 and presents the quality assurance (QA) review of sampling objectives, field procedures, and validation of laboratory results. This QA review was performed in accordance with the approved project-specific Quality Assurance Project Plan (QAPP, RMC 2014) and U.S. EPA guidance (USEPA 2010 and USEPA 2006). These data fulfill the site related samples that were specified in the FSP.

The final sampling event as described in the FSP, is to collect data at a reference site to establish natural background metal concentrations in surface water, sediment, vegetation tissue, fish tissue, and benthic macro invertebrate tissue. In collaboration with EPA, et al., the reference site will be selected and sampled during the 2016 field season.

A total of 649 samples were collected over a period of eleven weeks and evaluated herein, including 600 original samples and 49 QA/QC samples, as detailed below:

- Benthic macro-invertebrate samples (BM) were collected on August 17th, 18th, 19th, 20th, and 21st and September 3rd, 4th, 8th, and 9th, 2015 – (Figures 1-4);
- Fish tissue samples (FI) were collected on August 13th, 17th, and 19th and September 3rd, 2015 – (Figures 5-8);
- Sediment samples (SD) were collected on July 27th and 28th, 2015 – (Figures 9-12);
- Shallow groundwater samples (GW) were collected on August 25th, 26th and 27th and October 6th and 7th, 2015 – (Figures 13-16);
- Soil and tailings samples (SO, TL) were collected on July 29th, 30th, and 31st, August 4th, 5th, and 6th, September 10th, 11th, 14th, 15th, 16th, 17th, 18th, 21st, 22nd, 24th, 25th, 28th, 29th, and 30th, and October 1st and 5th, 2015 – (Figures 17-28);
- Surface water samples (SW) were collected on August 31st, September 1st and 2nd, and October 8th and 9th, 2015 – (Figures 29-32);
- Vegetation tissue samples (VG) were collected on July 27th and 28th, 2015 – (Figures 33-36);

A summary table of latitude and longitude coordinates of sample locations is available on request.

Samples were analyzed by American West Analytical Laboratories, Salt Lake City, Utah, an accredited lab by the National Environmental Laboratory Accreditation Conference (NELAC) and by the state of Utah. Samples were analyzed using water, wastewater, and soil protocols and Level II quality assurance reporting for the metals, metalloids, and other non-metallic compounds in accordance with the approved SAP (RMC, 2014).

EPA continued to provide oversight during portions of the field sampling. USFWS was present during the first day of fish and benthic macro invertebrate sampling.

No data were rejected or deemed unusable based on this review of field and laboratory procedures. This data quality review indicates that the data generated during the implementation of the SAP are of good quality and acceptable for their intended use.

2. REVIEW OF SAMPLING OBJECTIVES

The goal of the sampling effort, as specified in the approved SAP (RMC, 2014) is to collect data to define the nature and extent of contamination and to collect data to evaluate potential risks posed to human and ecological receptors by metals in surface water, shallow groundwater, soils, sediments, tailings, and organism tissue (benthic macro invertebrates, fish and vegetation) in the vicinity of OU2 and OU3.

The Data Validation and Verification Requirements from the QAPP are shown in Table 1. These required activities have been completed and verified and are discussed in detail in Section 3 and Section 4.

Table 1 - Data Validation and Verification Requirements

Data Validation and Verification Steps	Data Validation and Verification Methods
Samples were collected according to established locations and frequencies.	→ Comparison with Sampling Plan
Sample collection and handling followed established procedures.	→ Review of field notes, field procedures and COCs
Appropriate analytical methods were used; internal laboratory calibration checks were performed according to the method-specified protocol.	→ Review of analytical methods and case narratives provided with laboratory reports. Documentation of any communications with laboratory concerning problems or corrective actions.
Required holding times and laboratory reporting limits were met.	→ Comparison with established holding times and LRLs.
Field Duplicates for QA/AC	→ Field duplicates met acceptance criteria tabulation of RPDs and comparison with PARCC parameters
Acceptance criteria (see Table 8.0) for field and laboratory QC samples (field blanks, field dups, equipment/rinsate blanks, method blanks, LCS) were met.	→ Tabulation of RPDs and spike recoveries, and direct comparison with method-specific acceptance criteria (see SOPs in Appendix A). Comparison with PARCC parameters.
Appropriate steps were taken to ensure the accuracy of data reduction, including reducing data transfer errors in the preparation of summary data tables and maps.	→ Maintain permanent file for laboratory hardcopies of analysis reports. Minimize retyping of data and error check data entered into database, tables, maps, etc.

Precision, accuracy, representativeness, comparability and completeness criteria are shown in Table 2. These are discussed in detail in Section 4. Additional laboratory measurement data is collected in Appendix 5 – Duplicate Sample Assessment, and in Appendix 4 – Matrix Spike Assessment. Laboratory Data Qualifiers for the laboratory data is referenced from Appendix 3.

Table 2 - Precision, Accuracy, Representativeness, Comparability, and Completeness (PARCC) Criteria

Parameter	QC Program	Evaluation Criteria	Acceptance Criteria
Precision	Field Duplicate	Relative Percent Difference (RPD)	RPDs: If both results are >5x RL, then, RPD ≤ 35%. If one or both results are <5x RL, then absolute differences ≤ ± 2x greater RL
	Matrix Spike/Matrix Spike Duplicate (MS/MSD)	Relative Percent Difference (RPD)	See method-specific control limits ¹
Accuracy	Matrix Spike (MS)	Percent Recovery	See method-specific control limits ¹
	Matrix Spike Duplicate (MSD)	Percent Recovery	See method-specific control limits ¹
	Laboratory Control Samples (LCS)	Percent Recovery	See method-specific control limits ¹
Representativeness	Holding Times	Representative of Environmental Conditions	Holding Times Met 100 Percent
	Method Blanks	Qualitative Degree of Confidence	See method specific requirements ¹
	Equipment/Rinsate Blanks	Qualitative Degree of Confidence	Target analytes <1 X LRL; 5-10 X LRL for laboratory-induced contaminants.
	Field Duplicates	Qualitative Degree of Confidence	90 Percent of Field Duplicates Meet RPC Goals
Comparability	Standard Units of Measure	Qualitative Degree of Confidence	Laboratory Methods Followed
	Standard Analytical Methods		SOPs Followed
Competence	Complete Sampling	100 Percent Valid ² Samples	90 Percent Valid ² Data

3. SAMPLING PROCEDURES QUALITY ASSESSMENT

A total of 649 samples (14 benthic macro invertebrate, 24 fish, 13 sediment, 41 groundwater, 502 soil and tailings, 39 surface water, and 16 vegetation samples) were collected by United Park City Mines Company during July through October 2015. Sample labeling and ID conventions presented in the SAP were followed and no alterations were made.

The samples were hand delivered under chain-of-custody to American West Analytical Laboratories in Salt Lake City, Utah, for analysis of metals, metalloids, and other non-metallic compounds and parameters.

A list of samples collected by the eight different media and associated notes on sample acquisition is provided in Appendix 1. Appendix 2 is the sample inventory, correlating sample ID with Laboratory ID by date.

A summary of samples collected is provided in Table 3; sampling quality assurance metrics are summarized in Table 4. Table 3 shows 90.2% of planned samples were acquired: this is based on the original number planned, minus planned duplicates, minus 22 locations removed with EPA consensus, minus the 5 opportunistic sample locations that were added. This meets the QA completeness metric.

Table 3 - Sample Acquisition by Media

Media	Planned Samples	Not Sampled	Net Samples Acquired	Duplicate Samples	Limited Data Sets Acquired
Benthic	16	2	14	2	0
Fish	30	6	24	2	0
Groundwater	63	22	41	5	0
Sediment	13	0	13	2	0
Soil	554	53	501	31	13
Surface Water	48	9	39	5	10
Tailings	1	0	1	0	0
Vegetation	16	0	16	2	0
Totals	741	92	649	49	23

Table 4 - Sampling Quality Metrics

Week Number	Starting Date	Sampling Quality				
		Number Sampling Days	Total Samples	Duplicate Samples	Audits of Sampling Process	Audits of Logbook
1	7/27/15	5	84	7	0	0
2	8/3/15	3	81	5	0	0
3	8/10/15	1	7	1	0	0
4	8/17/15	5	19	3	0	0
5	8/24/15	3	21	3	0	0
6	8/31/15	5	31	3	0	0
7	9/7/15	4	36	2	0	0
8	9/14/15	5	121	8	0	0
9	9/21/15	4	102	7	0	0
10	9/28/15	4	105	6	0	0
11	10/5/15	5	42	4	0	0
11	11	44	649	49	0	0
		Sampling Days	Total	Total	Total	Total

3.1 FIELD PROCEDURES REVIEW

Sample collection followed the procedures in the approved project Quality Assurance Project Plan (QAPP) as summarized below:

- All samples were collected in appropriate containers with appropriate preservatives (where applicable) as supplied by the laboratory;
- All samples were collected following appropriate Standard Operating Procedures as specified in the QAPP;
- All specified field parameters were collected (pH, temperature, conductivity, DO, ORP, flow) at sites with adequate water.
- All field reading instruments were calibrated daily per manufacturer instructions and Standard Operating Procedures as specified in the QAPP;
- All samples were hand delivered to the laboratory within required holding times;
 - Lab set 1508366 report states that the sample receipt temperature exceeded the recommended USEPA limits for some analyses; however, fish and benthic macro invertebrate samples were collected, immediately placed on ice, and submitted to the analytical laboratory on the same day. The samples did not have enough

time in transit to cool down; therefore this note does not adversely affect data quality.

- Required field QA/QC samples were collected, except on July 30th, August 18th, 19th, 20th, and 21st, September 3rd, 4th, 8th, 9th, 10th, and 16th, and October 1st and 5th.
 - Benthic macro invertebrate sampling: August 18th, 20th, and 21st, September 3rd, 4th, 8th and 9th: Insufficient amount of individuals caught and/ or weight for duplicate laboratory sample. Reasonable effort was expended.
 - Fish sampling: August 19th and September 3rd: Insufficient amount of individuals caught and/ or weight for duplicate laboratory sample. Reasonable effort was expended.
 - Soil sampling: October 5th: Field conditions prevented duplicate laboratory sample.
 - Soil sampling: July 30th, September 10th and 16th, and October 1st: Field conditions prevented second duplicate laboratory sample.
- Relative percent differences of duplicate soil samples exceeded comparison criteria in several samples. This is not unexpected given the heterogeneous nature of soil samples and the small aliquot that is required for laboratory analysis. The data are not invalidated; instead the data have been qualified as estimated values.
- Required sample documentation was completed and reviewed, including field notes and Chain-of-Custody forms.

3.2 SAMPLING PROCESS DISCUSSION AND MODIFICATIONS

No surface water samples and no co-located sediment and biota samples were collected in OU3 P.C. East Reach, in concurrence with EPA oversight, due to the lack of perennial water.

Also, in consultation with EPA oversight, methyl mercury by method EPA 1630 was removed from the target analyte list for benthic macro invertebrates, fish, sediment, and vegetation media.

3.3 HEALTH AND SAFETY

All work was performed in accordance with the Site Health and Safety Plan, with no incidents logged.

4. LABORATORY DATA ANALYTICAL QUALITY ASSESSMENT

The analytical results are acceptable for their intended use as qualified. The review of sample analytical results and qualifications are presented in the following sections with summary explanations of any sample analysis deficiencies that resulted in changes or additions to laboratory reported quantitative results and data qualifiers. Detailed results for duplicate assessment and matrix spike assessment are included in Appendices 4 and 5.

4.1 SAMPLE PRESERVATION AND HOLDING TIMES

The objective is to determine the validity of the analytical results based on the sample condition and the holding time of the sample from the date of collection to the date of analysis. Requirements are specified in the project quality assurance/sampling and analysis plan.

All specified requirements were met during the sampling event.

4.2 METHOD BLANKS

The objective of method blank analysis results assessment is to determine the existence and magnitude of contamination resulting from laboratory activities. No contaminants should be detected in laboratory blanks.

There were no reported contaminants in the laboratory method blanks.

4.3 LABORATORY CONTROL SAMPLES

The laboratory control sample (LCS) serves as a monitor of the overall performance of all sample preparation and analysis procedures and is analyzed for each analyte using the same sample preparations, analytical methods, and quality assurance/quality control (QA/QC) procedures as employed for the other samples. QC requirements are specified in the project quality assurance/sampling and analysis plan. All LCS percent recoveries (%R) must fall within the control limits of 85-115%.

All reported LCS sample results are within control limits.

4.4 LABORATORY DUPLICATES

The objective of duplicate sample analysis is to demonstrate acceptable method precision by the laboratory at the time of analysis. Samples identified as field blanks or performance evaluation (PE) samples cannot be used for duplicate sample analysis. A control limit of 20% for the relative percent difference (RPD) for original and duplicate sample values greater than or equal to five times (5x) the quantitation/reporting limit (QL). A control limit of +/- QL is used if either the sample or duplicate value is less than 5x the QL.

All reported laboratory duplicate RPD results are within control limits.

4.5 MATRIX SPIKE DUPLICATES

The spiked sample analysis is designed to provide information about the effect of each sample matrix on the sample preparation procedures and the measurement methodology. Non-homogenous samples can impact the apparent method recovery, although aqueous samples are generally homogenous. Samples identified as field blanks or performance evaluation (PE) samples cannot be used for spiked sample analysis. The spike percent recovery (%R) should be within the established acceptance limits. However, spike recovery limits do not apply when the sample concentration is greater than 4x the spike added. In such an event, the data are reported unflagged, even if the %R does not meet the acceptance criteria. Acceptance criteria are specified in the project quality assurance/sampling and analysis plan. All matrix spike sample percent recoveries (%R) must fall within the control limits of 70-130%. Matrix spike duplicate results pairs should fall within 20%.

A number of (914 of 3134) matrix spike results reported outside recovery limits as noted in Appendix 4. Batches were accepted based on concurrent LCS recovery statistics which demonstrated valid analysis techniques and results.

This uncertainty does not invalidate the data collected, but there is less precision in the levels detected. Detected amounts are qualified as estimated values.

4.6 FIELD DUPLICATES

49 blind field duplicate sample pairs were analyzed by the laboratory. The RPDs were not always within +/-35% (or within 2x PQL for small concentrations); however, this is not unexpected for soil samples due to heterogeneity and small sample aliquot used for analysis. Two qualifiers were assigned to separate results for sample concentrations greater than five times the PQL ("a"), and for sample concentrations less than five times the PQL ("b"). If the RPD was greater than the control limit, an additional modifier "J" was added for both categories. 99.9% of samples were within 2x of each other; 94% of the samples were within control limits. The results are deemed usable as estimated data. Summary information is presented in Table 5. Sample results and relative percent differences (RPD) are presented in Appendix 5

Table 5 - Field Duplicate Analysis: Acceptable and Qualified Data

Media	Total # Analytes	Percent within Limit	b, J (<5xPQL)	a, J (>5xPQL)	> 2x
Soil	975	91%	19	66	3
Water	540	99%	2	2	1
Total	1515	94%	21	68	4

4.7 FIELD EQUIPMENT BLANKS

No field blanks were collected. All samples were collected using disposable sampling equipment and decontamination and rinsate blanks were not needed.

5. CONCLUSION

The results of the quality assurance review indicate that the analytical data are of good quality and acceptable for their intended use.

6. REFERENCES

Resource Management Consultants, Inc. (RMC). 2014. Sampling and Analysis Plan for Richardson Flat Tailings Site Operable Units 2 and 3.

USEPA. 2010. Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review. EPA-540-R-10-011. U.S. Environmental Protection Agency, Office of Superfund Remediation and Technology Innovation (OSRTI), Washington D.C.

USEPA. 2006. Data Quality Assessment: A Reviewer's Guide EPA QA/G-9R Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Data Review. EPA/240/B-06/002 February 2006. U.S. Environmental Protection Agency, Office of Environmental Information, Washington D.C.

APPENDIX 1 – DATA SAMPLES BY MEDIA

Sample acquisition, adjustment, and modification is discussed by media:

Benthic Macro Invertebrate (BM),

Fish (FI),

Sediment (SD),

Groundwater (GW),

Soil, Tailings (SO, TL),

Surface Water (SW), and

Vegetation (VG).

1.1 BENTHIC MACRO INVERTEBRATE (BM)

During the benthic macro-invertebrate sampling events, two locations had insufficient water and no laboratory samples were collected:

- OU3-BM-SC248NRB
- OU2-BM-IRF

Table 5 - Benthic Macro invertebrate Samples

Sample Date	Sample	Note
	OU2-BM-IRF	insufficient water; no sample collected
9/8/2015	OU2-0-BM-BIRF	
8/17/2015	OU2-0-BM-SCBNPRR	
8/17/2015	OU2-9-BM-SCBNPRR	Field duplicate
9/8/2015	OU2-0-BM-SCI	
8/20/2015	OU2-0-BM-SCWWT (comp 18/19)	
9/4/2015	OU3-0-BM-MRUBP	
8/19/2015	OU3-9-BM-NPCWR	Field duplicate
8/19/2015	OU3-0-BM-NPCWR (comp 18/19)	
8/21/2015	OU3-0-BM-SC1C	
9/9/2015	OU3-0-BM-SC248AC	
	OU3--BM-SC248NRB	insufficient water; no sample collected
9/3/2015	OU3-0-BM-SCRF72	
9/3/2015	OU3-0-BM-SCRFR	
9/4/2015	OU3-0-BM-SCURTFB	
8/18/2015	OU3-0-BM-SPCWR	

1.2 FISH (FI)

During the fish sampling events, two locations had insufficient water and no laboratory samples were collected:

- OU3-FI-SC248NRB
- OU2-FI-IRF

Also during fish sampling, four locations produced insufficient individuals and/ or weight for a laboratory sample:

- OU3-FI-MRUBP
- OU3-FI-SCURTFB
- OU3-FI-SC248AC
- OU3-FI-SC1C

Two fish sampling locations produced insufficient individuals and/ or weight for the required three samples, and only two laboratory samples were collected.

- OU3-FI-SCRF72
- OU2-FI-SCI

Table 6 - Fish Samples

Sample Date	Sample	Note
	OU2-FI-IRF	insufficient water; no sample collected
8/13/2015	OU2-0-FI-BIRF-MIX	
8/13/2015	OU2-0-FI-BIRF-RS1	
8/13/2015	OU2-0-FI-BIRF-RS2	
8/17/2015	OU2-0-FI-SCBNPRR-RS1	
8/17/2015	OU2-0-FI-SCBNPRR-SD1	
8/17/2015	OU2-9-FI-SCBNPRR-SD1	Field duplicate
8/17/2015	OU2-0-FI-SCBRNPRR-RS2	
8/19/2015	OU2-0-FI-SCI-SD1	insufficient individuals / weight for three samples
8/19/2015	OU2-0-FI-SCI-SD2	
8/19/2015	OU2-0-FI-SCWWT-RS1	
8/19/2015	OU2-0-FI-SCWWT-SD1	
8/19/2015	OU2-0-FI-SCWWT-SD2	
	OU3-FI-MRUBP	insufficient individuals / weight
8/13/2015	OU3-9-FI-NPCWR-MIX	Field duplicate

Sample Date	Sample	Note
8/13/2015	OU3-0-FI-NPCWR-RS1	
8/13/2015	OU3-0-FI-NPCWR-SD1	
8/13/2015	OU3-0-FI-NPCWR-SD2	
	OU3-FI-SC1C	insufficient individuals / weight
	OU3-FI-SC248AC	insufficient individuals / weight
	OU3-FI-SC248NRB	insufficient water; no sample collected
	OU3-FI-SCURTFB	insufficient individuals / weight
9/3/2015	OU3-0-FI-SCRF72-RS1	insufficient individuals / weight
9/3/2015	OU3-0-FI-SCRF72-RS2	for three samples
9/3/2015	OU3-0-FI-SCRFR-MIX	
9/3/2015	OU3-0-FI-SCRFR-MS1	
9/3/2015	OU3-0-FI-SCRFR-MS2	
8/17/2015	OU3-0-FI-SPCWR-RS1	
8/17/2015	OU3-0-FI-SPCWR-SD1	
8/17/2015	OU3-0-FI-SPCWR-SD2	

1.3 GROUNDWATER (GW)

One groundwater sampling location continued to be relocated from the proposed sampling location in the SAP. During first quarter sampling, piezometer FPT-6A had extensive damage and could not be sampled and an alternative piezometer approximately 200 feet northeast was sampled. Based on known groundwater flow, this changed sample location is representative, and change does not alter the intent of the SAP in any way.

In August, no laboratory samples were collected from five piezometers due to insufficient water quantity:

- OU2-GW-T6E0375
- OU2-GW-T3E1125
- OU3-GW-FPT-2B
- OU3-GW-MR-2
- OU3-GW-MR-3

In August, no laboratory samples and no field water quality measurements were collected from six piezometers due to insufficient water quantity:

- OU3-GW-P2-1(B)
- OU2-GW-T5E1875
- OU3-GW-T2W0375
- OU3-GW-RT-12

- OU3-GW-MR-4
- OU2-GW-T4E1375: Dry

In October, no laboratory samples were collected from two piezometers due to insufficient water quantity:

- OU2-GW-T3E1125
- OU3-GW-RT-12

In October, no laboratory samples and no field water quality measurements were collected from nine piezometers due to insufficient water quantity:

- OU2-GW-T6E0375
- OU3-GW-P2-1(B)
- OU2-GW-T5E1875
- OU3-GW-FPT-2B
- OU3-GW-MR-4
- OU3-GW-MR-2
- OU3-GW-MR-1
- OU2-GW-T4E1375: Dry
- OU3-GW-T2W0375: Dry

Table 7 - Groundwater Samples

Sample Date	Sample	Note
10/6/2015	OU2-0-GW-P2-2 (A)	
10/6/2015	OU2-0-GW-P2-2 (B)	
8/25/2015	OU2-0-GW-P2-2(A)	
8/25/2015	OU2-0-GW-P2-2(B)	
8/26/2015	OU2-0-GW-P2-4	
8/26/2015	OU2-9-GW-P2-4	Field duplicate
10/6/2015	OU2-0-GW-P2-4	
8/25/2015	OU2-0-GW-P2-5	
8/25/2015	OU2-9-GW-P2-5	Field duplicate
10/6/2015	OU2-0-GW-P2-5	
10/6/2015	OU2-9-GW-P2-5	Field duplicate
8/26/2015	OU2-0-GW-T3E0125	
10/7/2015	OU2-0-GW-T3E0125	
10/6/2015	OU2-0-GW-T3W0375	
August	OU2-GW-T3E1125	insufficient water quantity
October	OU2-GW-T3E1125	insufficient water quantity

Sample Date	Sample	Note
8/26/2015	OU2-0-GW-T4E0875	
10/6/2015	OU2-0-GW-T4E0875	
August	OU2-GW-T4E1375	dry (no WQM)
October	OU2-GW-T4E1375	dry (no WQM)
10/6/2015	OU2-0-GW-T5E0875	
August	OU2-GW-T5E1875	insufficient water quantity (no WQM)
October	OU2-GW-T5E1875	insufficient water quantity (no WQM)
August	OU2-GW-T6E0375	insufficient water quantity
October	OU2-GW-T6E0375	insufficient water quantity (no WQM)
8/25/2015	OU2-0-GW-TSE0875	
August	OU3-GW-FPT-2B	insufficient water quantity
October	OU3-GW-FPT-2B	insufficient water quantity (no WQM)
10/7/2015	OU3-0-GW-FPT-6A	(note - repositioned)
8/27/2015	OU3-0-GW-FPT-6A	(note - repositioned)
8/27/2015	OU3-9-GW-FPT-6A	(note - repositioned), Field duplicate
October	OU3-GW-MR-1	insufficient water quantity (no WQM)
August	OU3-GW-MR-2	insufficient water quantity
October	OU3-GW-MR-2	insufficient water quantity (no WQM)
August	OU3-GW-MR-3	insufficient water quantity
8/27/2015	OU3-0-GW-MR-3	
10/7/2015	OU3-0-GW-MR-3	
August	OU3-GW-MR-4	insufficient water quantity (no WQM)
October	OU3-GW-MR-4	insufficient water quantity (no WQM)
8/27/2015	OU3-0-GW-MR-5	
10/7/2015	OU3-0-GW-MR-5	
8/26/2015	OU3-0-GW-MR-6	
10/7/2015	OU3-0-GW-MR-6	
8/25/2015	OU3-0-GW-P2-1(A)	
10/6/2015	OU3-0-GW-P2-1(A)	
August	OU3-GW-P2-1(B)	insufficient water quantity (no WQM)
October	OU3-GW-P2-1(B)	insufficient water quantity (no WQM)
8/26/2015	OU3-0-GW-RT-11	
10/7/2015	OU3-0-GW-RT-11	
August	OU3-GW-RT-12	insufficient water quantity (no WQM)
October	OU3-GW-RT-12	insufficient water quantity
8/26/2015	OU3-0-GW-T1E0125	
10/7/2015	OU3-0-GW-T1E0125	
10/7/2015	OU3-9-GW-T1E0125	Field duplicate
8/26/2015	OU3-0-GW-T2E0125	
10/6/2015	OU3-0-GW-T2E0125	

Sample Date	Sample	Note
August	OU3-GW-T2W0375	insufficient water quantity (no WQM)
October	OU3-GW-T2W0375	insufficient water quantity (no WQM)
8/26/2015	OU3-0-GW-T3W0375	
8/25/2015	OU3-0-GW-T6E1350	
10/6/2015	OU3-0-GW-T6E1350	
8/25/2015	OU3-0-GW-T6W0625	
10/6/2015	OU3-0-GW-T6W0625	

1.4 SEDIMENT (SD)

TABLE 8 - SEDIMENT SAMPLES

Sample Date	Sample	Note
7/27/2015	OU2-0-SD-BIRF	
7/27/2015	OU2-0-SD-IRF	
7/28/2015	OU2-0-SD-SCBNPRR	
7/27/2015	OU2-0-SD-SCI	
7/27/2015	OU2-9-SD-SCI	Field duplicate
7/28/2015	OU2-0-SD-SCWWT	
7/28/2015	OU2-9-SD-SCWWT	Field duplicate
7/28/2015	OU3-0-SD-NPCWR	
7/28/2015	OU3-0-SD-SC1C	
7/28/2015	OU3-0-SD-SC248AC	
7/28/2015	OU3-0-SD-SC248NRB	
7/28/2015	OU3-0-SD-SCRF72	
7/28/2015	OU3-0-SD-SPCWR	

1.5 SOIL (SO)

When necessary, soil sampling locations were relocated due to accessibility issues, to avoid fill/construction materials, or to avoid hazards, such as utility lines. Six soil sampling locations were relocated approximately 20 to 50 feet and laboratory samples were collected:

- OU3-SO-ER-10Q
- OU3-SO-ER-1J
- OU3-SO-ER-1N
- OU3-SO-NR-16K
- OU3-SO-MRU-11C
- OU2-SO-21D

These sample location changes did not alter the intent of the SAP in any way.

No laboratory samples were collected at 20 soil sampling locations due to accessibility issues, fill/construction materials, and/or hazards:

- OU3-SO-NR-11G
- OU3-SO-FT-6C
- OU2-SO-MRL-14D
- OU3-SO-MRL-14E
- OU3-SO-MRL-15A
- OU3-SO-MRL-15B
- OU3-SO-MRL-15C
- OU3-SO-MRL-16C
- OU3-SO-MRL-16E
- OU3-SO-MRU-8A
- OU3-SO-MRU-9D
- OU3-SO-MRU-10D
- OU3-SO-MRU-11D
- OU3-SO-MRU-12D
- OU2-SO-1A
- OU2-SO-16R
- OU2-SO-26F
- OU2-SO-28F
- OU2-SO-30F
- OU2-SO-40S

At one soil sample location, only a surface laboratory sample was collected due to being rejected by bedrock.

- OU3-SO-MRU-9B

Also at one soil sample location, a subsurface laboratory sample was not collected because of difficult sampling conditions; however, a surface laboratory sample and a one foot into uncontaminated soil laboratory sample was collected.

- OU3-SO-MRL-18F

At eight soil sample locations, surface and subsurface laboratory samples were collected with no samples one foot into uncontaminated soil due to water and/or tailings encountered that would cave the soil pit in. Revisiting these locations to geoprobe sample was planned; however, in concurrence with EPA oversight, the locations were not visited again.

- OU3-SO-WR-2B
- OU3-SO-MRL-15E
- OU3-SO-MRU-5B
- OU3-SO-MRU-5C
- OU3-SO-MRU-7C
- OU3-SO-MRU-8B
- OU3-SO-MRU-12B
- OU2-SO-45T

At 17 soil sample locations, no laboratory samples were collected due to mud or water present at the location. Revisiting these locations to either geoprobe or sediment sample was planned; however, in concurrence with EPA oversight, the locations were not visited again.

- OU3-SO-FT-2D
- OU3-SO-FT-4D
- OU3-SO-FT-5B
- OU3-SO-FT-5D
- OU3-SO-MRL-14F
- OU3-SO-MRL-15F
- OU3-SO-MRL-17E
- OU3-SO-MRL-17F
- OU3-SO-MRU-9C
- OU3-SO-MRU-11B
- OU3-SO-MRU-13D
- OU2-SO-18F

- OU2-SO-18L
- OU2-SO-18N
- OU2-SO-21L
- OU2-SO-23L
- OU2-SO-49S

Three soil sample locations were considered upland and too far away from the floodplain study area. No laboratory samples were collected, in concurrence with EPA oversight.

- OU3-SO-MRU-7A
- OU3-SO-MRU-9A
- OU3-SO-MRU-10A

No soil samples were collected under or on the north side of Interstate 80 in concurrence with EPA oversight - ten locations were originally proposed:

- OU2-SO-53N
- OU2-SO-53O
- OU2-SO-53P
- OU2-SO-53R
- OU2-SO-54P
- OU2-SO-54Q
- OU2-SO-55P
- OU2-SO-55Q
- OU2-SO-55R
- OU2-SO-55S

Five opportunity laboratory samples were and collected:

- OU2-0-SO-OP1-0
- OU2-0-SO-OP1-0.501
- OU2-0-SO-OP1-022.5
- OU2-0-SO-OP2-0
- OU2-0-SO-OP2-0.501

Table 9 - Soil Samples

Sample Date	Sample	Note
9/17/2015	OU2-0-SO-10E-0.501	
9/17/2015	OU2-0-SO-10E-1.6	
9/21/2015	OU2-0-SO-10L-0	
9/21/2015	OU2-0-SO-10L-0.501	
9/21/2015	OU2-0-SO-10L-1.5	
9/22/2015	OU2-0-SO-12B-0.501	
9/22/2015	OU2-0-SO-12B-1.2	
9/17/2015	OU2-0-SO-12I-0	
9/17/2015	OU2-0-SO-12I-0.501	
9/17/2015	OU2-0-SO-12I-2.5	
9/21/2015	OU2-0-SO-12L-0	
9/21/2015	OU2-0-SO-12L-0.501	
9/21/2015	OU2-0-SO-12L-1.9	
9/16/2015	OU2-0-SO-12N-0.501	
9/16/2015	OU2-0-SO-12N-2.3	
9/17/2015	OU2-0-SO-13H-0.501	
9/17/2015	OU2-0-SO-13H-1.6	
9/16/2015	OU2-0-SO-140-0.501	
9/16/2015	OU2-0-SO-140-1.5	
9/22/2015	OU2-0-SO-14C-0.501	
9/22/2015	OU2-0-SO-15D-0.501	
9/22/2015	OU2-0-SO-15D-02	
9/17/2015	OU2-0-SO-15L-0	
9/17/2015	OU2-0-SO-15L-0.501	
9/17/2015	OU2-0-SO-15L-3.8	
9/16/2015	OU2-0-SO-15N-0	
9/16/2015	OU2-0-SO-15N-0.501	
9/16/2015	OU2-0-SO-15N-2.5	
9/17/2015	OU2-0-SO-16H-0.501	
9/17/2015	OU2-0-SO-16H-1.5	
	OU2-SO-16R	inaccessible
9/22/2015	OU2-0-SO-17F-0.501	
9/17/2015	OU2-0-SO-17H-0.501	
9/17/2015	OU2-0-SO-17H-1.7	
9/17/2015	OU2-0-SO-17L-0	
9/17/2015	OU2-0-SO-17L-0.501	
9/16/2015	OU2-0-SO-17N-0	
9/16/2015	OU2-0-SO-17N-0.501	

Sample Date	Sample	Note
9/16/2015	OU2-0-SO-17N-2.7	
	OU2-SO-18F	inaccessible
	OU2-SO-18L	inaccessible
9/17/2015	OU2-0-SO-18H-0.501	
9/17/2015	OU2-9-SO-18H-0.501	Field duplicate
9/17/2015	OU2-0-SO-18H-1.6	
	OU2-SO-18N	inaccessible
9/16/2015	OU2-0-SO-19W-0.501	
9/16/2015	OU2-0-SO-19W-1.6	
	OU2-SO-1A	inaccessible
9/22/2015	OU2-0-SO-21D-0	relocated
9/22/2015	OU2-0-SO-21D-0.501	relocated
	OU2-SO-21L	inaccessible
	OU2-SO-23L	inaccessible
9/16/2015	OU2-0-SO-23O-0.501	
9/16/2015	OU2-9-SO-23O-0.501	Field duplicate
9/16/2015	OU2-0-SO-23O-3.1	
9/15/2015	OU2-0-SO-24I-0.501	
9/15/2015	OU2-0-SO-24I-1.5	
9/16/2015	OU2-0-SO-25R-0.501	
9/16/2015	OU2-0-SO-25R-3.8	
	OU2-SO-26F	inaccessible
9/15/2015	OU2-0-SO-26O-0.501	
9/15/2015	OU2-9-SO-26O-0.501	Field duplicate
9/15/2015	OU2-0-SO-26O-2.7	
9/15/2015	OU2-0-SO-26S-0.501	
9/15/2015	OU2-0-SO-26S-2.2	
9/16/2015	OU2-0-SO-26V-0	
9/16/2015	OU2-0-SO-26V-0.501	
9/16/2015	OU2-0-SO-26V-2.8	
9/15/2015	OU2-0-SO-27I-0	
9/15/2015	OU2-0-SO-27I-0.501	
	OU2-SO-28F	inaccessible
9/15/2015	OU2-0-SO-28L-0.501	
9/15/2015	OU2-0-SO-28L-1.6	
9/15/2015	OU2-0-SO-28N-0.501	
9/15/2015	OU2-0-SO-28N-1.6	

Sample Date	Sample	Note
9/15/2015	OU2-0-SO-28P-0.501	
9/15/2015	OU2-0-SO-28P-1.7	
9/15/2015	OU2-0-SO-29F-0	
9/15/2015	OU2-0-SO-29F-0.501	
9/15/2015	OU2-9-SO-29F-0.501	Field duplicate
9/22/2015	OU2-0-SO-2A-0	
9/22/2015	OU2-0-SO-2A-0.501	
9/22/2015	OU2-0-SO-2A-02	
	OU2-SO-30F	inaccessible
9/15/2015	OU2-0-SO-30H-0.501	
9/15/2015	OU2-0-SO-30H-1.5	
9/15/2015	OU2-0-SO-30R-0	
9/15/2015	OU2-0-SO-30R-0.501	
9/15/2015	OU2-0-SO-30R-03	
9/15/2015	OU2-0-SO-30U-0.501	
9/15/2015	OU2-0-SO-30U-3.4	
9/16/2015	OU2-0-SO-30Y-0	
9/16/2015	OU2-0-SO-30Y-0.501	
9/16/2015	OU2-0-SO-30Y-4.6	
8/4/2015	OU2-0-SO-31L-0.501	
8/4/2015	OU2-0-SO-31L-2.5	
8/5/2015	OU2-0-SO-31X-0.501	
8/5/2015	OU2-0-SO-31X-6.7	
8/4/2015	OU2-0-SO-32N-0.501	
8/4/2015	OU2-0-SO-32N-02	
8/4/2015	OU2-0-SO-32R-0.501	
8/4/2015	OU2-0-SO-32R-1.5	
8/5/2015	OU2-9-SO-32V-0.501	Field duplicate
8/5/2015	OU2-0-SO-32V-0.501	
8/5/2015	OU2-0-SO-32V-2.6	
8/5/2015	OU2-0-SO-33F-0.501	
8/5/2015	OU2-0-SO-33F-1.4	
8/5/2015	OU2-0-SO-33I-0.501	
8/5/2015	OU2-0-SO-33I-1.3	
8/5/2015	OU2-0-SO-33L-0.501	
8/4/2015	OU2-0-SO-33N-0.501	
8/4/2015	OU2-0-SO-33N-1.5	
8/5/2015	OU2-0-SO-33X-0.501	
8/5/2015	OU2-0-SO-33X-3.2	
8/5/2015	OU2-0-SO-34G-0	

Sample Date	Sample	Note
8/5/2015	OU2-0-SO-34G-0.501	
8/4/2015	OU2-0-SO-34N-0.501	
8/4/2015	OU2-0-SO-34N-1.8	
8/4/2015	OU2-9-SO-34S-0.501	Field duplicate
8/4/2015	OU2-0-SO-34S-0.501	
8/4/2015	OU2-0-SO-34S-2.5	
8/5/2015	OU2-0-SO-34Z-0.501	
8/5/2015	OU2-0-SO-34Z-05	
9/14/2015	OU2-0-SO-35N-0.501	
9/14/2015	OU2-0-SO-35N-1.5	
8/4/2015	OU2-0-SO-35S-0.501	
8/4/2015	OU2-0-SO-35S-1.8	
8/5/2015	OU2-0-SO-35V-0	
8/5/2015	OU2-0-SO-35V-0.501	
8/4/2015	OU2-0-SO-37S-0.501	
8/4/2015	OU2-0-SO-37S-02	
8/5/2015	OU2-0-SO-37V-0	
8/5/2015	OU2-0-SO-37V-0.501	
8/4/2015	OU2-0-SO-39S-0.501	
8/4/2015	OU2-0-SO-39V-0	
8/4/2015	OU2-0-SO-39V-0.501	
8/4/2015	OU2-0-SO-39V-1.5	
9/24/2015	OU2-0-SO-3B-0	
9/24/2015	OU2-0-SO-3B-0.501	
9/24/2015	OU2-9-SO-3B-0.501	Field duplicate
9/24/2015	OU2-0-SO-3B-1.3	
	OU2-SO-40S	inaccessible
8/4/2015	OU2-0-SO-43T-0	
8/4/2015	OU2-0-SO-43T-0.501	
9/14/2015	OU2-0-SO-44T-0	
9/14/2015	OU2-0-SO-44T-0.501	
9/14/2015	OU2-0-SO-44T-5.5	
7/31/2015	OU2-0-SO-44V-0	
7/31/2015	OU2-0-SO-44V-0.501	
7/31/2015	OU2-0-SO-44V-6.5	
7/31/2015	OU2-0-SO-44W-0	
7/31/2015	OU2-0-SO-44W-0.501	
7/31/2015	OU2-0-SO-44W-2.5	

Sample Date	Sample	Note
7/30/2015	OU2-0-SO-45T-0	limited sampling conditions
7/30/2015	OU2-0-SO-45T-0.501	
7/30/2015	OU2-0-SO-45V-0	
7/30/2015	OU2-0-SO-45V-0.501	
7/30/2015	OU2-0-SO-45V-3.6	
7/30/2015	OU2-0-SO-46R-0.501	
7/30/2015	OU2-0-SO-46R-6.8	
7/30/2015	OU2-0-SO-46T-0.501	
7/30/2015	OU2-0-SO-46T-05	
7/30/2015	OU2-0-SO-46V-0	
7/30/2015	OU2-0-SO-46V-0.501	
7/30/2015	OU2-0-SO-46V-6.1	
7/30/2015	OU2-0-SO-47T-0	
7/30/2015	OU2-0-SO-47T-0.501	
7/30/2015	OU2-0-SO-47T-5.9	
7/30/2015	OU2-0-SO-48S-0	
7/30/2015	OU2-0-SO-48S-0.501	
7/30/2015	OU2-0-SO-48S-5.2	
7/30/2015	OU2-9-SO-48S-5.2	Field duplicate
7/30/2015	OU2-0-SO-48T-0	
7/30/2015	OU2-0-SO-48T-0.501	
7/30/2015	OU2-0-SO-48T-04	
	OU2-SO-49S	inaccessible
9/24/2015	OU2-0-SO-4A-0	
9/24/2015	OU2-0-SO-4A-0.501	
9/24/2015	OU2-0-SO-4A-033.5	
9/24/2015	OU2-0-SO-4B-0	
9/24/2015	OU2-0-SO-4B-0.501	
7/29/2015	OU2-0-SO-50P-0	
7/29/2015	OU2-9-SO-50P-0	Field duplicate
7/29/2015	OU2-0-SO-50Q-0	
7/29/2015	OU2-0-SO-50Q-0.501	
7/29/2015	OU2-0-SO-50Q-04	
7/29/2015	OU2-0-SO-50R-0.501	
7/29/2015	OU2-0-SO-50R-6.807	
7/30/2015	OU2-0-SO-50T-0	
7/30/2015	OU2-0-SO-50T-0.501	
7/29/2015	OU2-0-SO-51P-0.501	

Sample Date	Sample	Note
	OU2-SO-53N	north of Interstate 80
	OU2-SO-53O	north of Interstate 80
	OU2-SO-53P	north of Interstate 80
	OU2-SO-53R	north of Interstate 80
	OU2-SO-54P	north of Interstate 80
	OU2-SO-54Q	north of Interstate 80
	OU2-SO-55P	north of Interstate 80
	OU2-SO-55Q	north of Interstate 80
	OU2-SO-55R	north of Interstate 80
	OU2-SO-55S	north of Interstate 80
9/22/2015	OU2-0-SO-7C-0.501	
9/22/2015	OU2-0-SO-7C-2.4	
9/17/2015	OU2-0-SO-7F-0	
9/17/2015	OU2-0-SO-7F-0.501	
9/17/2015	OU2-0-SO-7F-2.5	
9/17/2015	OU2-0-SO-8G-0	
9/17/2015	OU2-0-SO-8G-0.501	
9/17/2015	OU2-9-SO-8G-0.501	Field duplicate
9/17/2015	OU2-0-SO-8G-2.7	
9/21/2015	OU2-0-SO-8I-0	
9/21/2015	OU2-0-SO-8I-0.501	
9/21/2015	OU2-9-SO-8I-0.501	Field duplicate
9/21/2015	OU2-0-SO-8I-3.2	
	OU2-SO-MRL-14D	inaccessible
7/29/2015	OU2-0-SO-OP1-0	opportunity sites
7/29/2015	OU2-0-SO-OP1-0.501	opportunity sites
7/29/2015	OU2-0-SO-OP1-022.5	opportunity sites
9/17/2015	OU2-0-SO-OP2-0	opportunity sites
9/17/2015	OU2-0-SO-OP2-0.501	opportunity sites
9/11/2015	OU3-0-SO-ER-10Q-0.501	relocated
9/11/2015	OU3-0-SO-ER-10Q-1.8	relocated
9/11/2015	OU3-0-SO-ER-10S-0	
9/11/2015	OU3-0-SO-ER-10S-0.501	
9/11/2015	OU3-0-SO-ER-10S-1.6	
9/14/2015	OU3-0-SO-ER-11D-0	
9/14/2015	OU3-0-SO-ER-11D-0.501	
9/14/2015	OU3-0-SO-ER-11D-1.9	
9/14/2015	OU3-0-SO-ER-11Q-0.501	

Sample Date	Sample	Note
9/14/2015	OU3-0-SO-ER-11Q-1.8	
9/11/2015	OU3-0-SO-ER-11S-0	
9/11/2015	OU3-0-SO-ER-11S-0.501	
9/14/2015	OU3-0-SO-ER-12R-0	
9/14/2015	OU3-0-SO-ER-12R-0.501	
9/14/2015	OU3-9-SO-ER-12R-0.501	Field duplicate
9/14/2015	OU3-0-SO-ER-1C-0.501	
9/14/2015	OU3-0-SO-ER-1C-1.7	
8/5/2015	OU3-0-SO-ER-1J-0.501	relocated
8/5/2015	OU3-9-SO-ER-1J-0.501	Relocated, Field duplicate
8/5/2015	OU3-0-SO-ER-1J-1.6	relocated
8/5/2015	OU3-0-SO-ER-1N-0.501	relocated
8/5/2015	OU3-0-SO-ER-1N-02	relocated
9/14/2015	OU3-0-SO-ER-2A-0.501	
9/14/2015	OU3-0-SO-ER-2A-1.9	
8/6/2015	OU3-0-SO-ER-2D-0.501	
8/6/2015	OU3-0-SO-ER-2D-1.5	
8/6/2015	OU3-0-SO-ER-2H-0.501	
8/6/2015	OU3-0-SO-ER-2H-1.8	
9/14/2015	OU3-0-SO-ER-3C-0.501	
9/14/2015	OU3-9-SO-ER-3C-0.501	Field duplicate
9/14/2015	OU3-0-SO-ER-3C-1.5	
8/6/2015	OU3-0-SO-ER-3E-0.501	
8/6/2015	OU3-0-SO-ER-3E-02	
8/6/2015	OU3-0-SO-ER-3H-0.501	
8/6/2015	OU3-0-SO-ER-3H-2.1	
8/6/2015	OU3-0-SO-ER-3M-0	
8/6/2015	OU3-0-SO-ER-3M-0.501	
8/6/2015	OU3-0-SO-ER-3M-02	
8/6/2015	OU3-9-SO-ER-3M-02	Field duplicate
9/14/2015	OU3-0-SO-ER-4B-0	
9/14/2015	OU3-0-SO-ER-4B-0.501	
9/14/2015	OU3-0-SO-ER-4B-1.5	
8/6/2015	OU3-0-SO-ER-4D-0.501	
8/6/2015	OU3-0-SO-ER-4D-2.1	
9/10/2015	OU3-0-SO-ER-4H-0.501	
9/10/2015	OU3-0-SO-ER-4H-1.5	

Sample Date	Sample	Note
9/10/2015	OU3-0-SO-ER-4N-0.501	
9/10/2015	OU3-0-SO-ER-4N-1.5	
8/5/2015	OU3-0-SO-ER-4Q-0	
8/5/2015	OU3-0-SO-ER-4Q-0.501	
8/5/2015	OU3-0-SO-ER-4Q-1.7	
8/6/2015	OU3-0-SO-ER-5A-0	
8/6/2015	OU3-0-SO-ER-5A-0.501	
8/6/2015	OU3-0-SO-ER-5A-02	
8/6/2015	OU3-0-SO-ER-5G-0	
9/10/2015	OU3-0-SO-ER-5G-0.501	
9/10/2015	OU3-9-SO-ER-5G-0.501	Field duplicate
9/10/2015	OU3-0-SO-ER-5G-02	
9/10/2015	OU3-0-SO-ER-5K-0	
9/10/2015	OU3-0-SO-ER-5K-0.501	
9/10/2015	OU3-0-SO-ER-5K-1.9	
9/14/2015	OU3-0-SO-ER-6A-0	
9/14/2015	OU3-0-SO-ER-6A-0.501	
9/14/2015	OU3-0-SO-ER-6D-0.501	
9/14/2015	OU3-0-SO-ER-6D-1.5	
9/10/2015	OU3-0-SO-ER-6H-0.501	
9/10/2015	OU3-0-SO-ER-6H-1.7	
9/10/2015	OU3-0-SO-ER-6N-0.501	
9/10/2015	OU3-0-SO-ER-6N-02	
9/10/2015	OU3-0-SO-ER-7J-0	
9/10/2015	OU3-0-SO-ER-7J-0.501	
9/10/2015	OU3-0-SO-ER-7O-0.501	
9/10/2015	OU3-0-SO-ER-7O-02	
9/10/2015	OU3-0-SO-ER-7P-0	
9/10/2015	OU3-0-SO-ER-7P-0.501	
9/10/2015	OU3-0-SO-ER-7P-1.9	
9/14/2015	OU3-0-SO-ER-8A-0	
9/14/2015	OU3-0-SO-ER-8A-0501	
9/10/2015	OU3-0-SO-ER-8Q-0.501	
9/10/2015	OU3-0-SO-ER-8Q-1.7	
9/11/2015	OU3-0-SO-ER-9Q-0.501	
9/11/2015	OU3-9-SO-ER-9Q-0.501	Field duplicate
9/11/2015	OU3-0-SO-ER-9Q-02	
9/28/2015	OU3-0-SO-FT-1B-0	
9/28/2015	OU3-0-SO-FT-1B-0.501	
9/28/2015	OU3-0-SO-FT-1B-1.5	

Sample Date	Sample	Note
9/25/2015	OU3-0-SO-FT-1C-0	
9/25/2015	OU3-0-SO-FT-1C-0.501	
9/25/2015	OU3-0-SO-FT-1C-3.4	
9/28/2015	OU3-0-SO-FT-2B-0	
9/28/2015	OU3-0-SO-FT-2B-0.501	
9/28/2015	OU3-9-SO-FT-2B-0.501	Field duplicate
9/28/2015	OU3-0-SO-FT-2B-1.6	
9/25/2015	OU3-0-SO-FT-2C-0	
9/25/2015	OU3-0-SO-FT-2C-0.501	
9/25/2015	OU3-0-SO-FT-2C-2.9	
	OU3-SO-FT-2D	inaccessible
10/5/2015	OU3-0-SO-FT-3B-0	
10/5/2015	OU3-0-SO-FT-3B-0.501	
10/5/2015	OU3-0-SO-FT-3B-1.8	
9/25/2015	OU3-0-SO-FT-3C-0	
9/25/2015	OU3-0-SO-FT-3C-0.501	
9/25/2015	OU3-0-SO-FT-3C-03	
9/25/2015	OU3-0-SO-FT-3D-0	
9/25/2015	OU3-0-SO-FT-3D-0.501	
9/25/2015	OU3-0-SO-FT-3D-02	
9/28/2015	OU3-0-SO-FT-4A-0	
9/28/2015	OU3-0-SO-FT-4A-0501	
9/25/2015	OU3-0-SO-FT-4B-0	
9/25/2015	OU3-0-SO-FT-4B-0.501	
9/25/2015	OU3-9-SO-FT-4B-0.501	Field duplicate
9/25/2015	OU3-0-SO-FT-4B-3.8	
9/25/2015	OU3-0-SO-FT-4C-0	
9/25/2015	OU3-0-SO-FT-4C-0.501	
9/25/2015	OU3-0-SO-FT-4C-2.6	
	OU3-SO-FT-4D	inaccessible
9/25/2015	OU3-0-SO-FT-4E-0	
9/25/2015	OU3-0-SO-FT-4E-0.501	
	OU3-SO-FT-5B	inaccessible
9/25/2015	OU3-0-SO-FT-5C-0	
9/25/2015	OU3-0-SO-FT-5C-0.501	
9/25/2015	OU3-0-SO-FT-5C-3.5	
	OU3-SO-FT-5D	inaccessible
9/25/2015	OU3-0-SO-FT-5E-0	

Sample Date	Sample	Note
9/25/2015	OU3-9-SO-FT-5E-0.501	Field duplicate
9/25/2015	OU3-0-SO-FT-5E-0.501	
9/24/2015	OU3-0-SO-FT-6B-0	
9/24/2015	OU3-0-SO-FT-6B-0.501	
9/24/2015	OU3-0-SO-FT-6B-4.505	
	OU3-SO-FT-6C	inaccessible
9/25/2015	OU3-0-SO-FT-6D-0	
9/25/2015	OU3-0-SO-FT-6D-0.501	
	OU3-SO-MRL-14D	inaccessible
	OU3-SO-MRL-14E	inaccessible
	OU3-SO-MRL-14F	inaccessible
9/29/2015	OU3-0-SO-MRL-14G-0	
9/29/2015	OU3-0-SO-MRL-14G-0.501	
9/29/2015	OU3-0-SO-MRL-14H-0	
9/29/2015	OU3-0-SO-MRL-14H-0.501	
9/29/2015	OU3-0-SO-MRL-14I-0	
9/29/2015	OU3-0-SO-MRL-14I-0.501	
9/29/2015	OU3-0-SO-MRL-14I-1.9	
9/29/2015	OU3-0-SO-MRL-14J-0	
9/29/2015	OU3-0-SO-MRL-14J-0.501	
	OU3-SO-MRL-15A	inaccessible
	OU3-SO-MRL-15B	inaccessible
	OU3-SO-MRL-15C	inaccessible
9/29/2015	OU3-0-SO-MRL-15D-0	
9/29/2015	OU3-0-SO-MRL-15D-0.501	
9/29/2015	OU3-0-SO-MRL-15E-0	limited sampling conditions
9/29/2015	OU3-0-SO-MRL-15E-0.501	limited sampling conditions
	OU3-SO-MRL-15F	inaccessible
9/29/2015	OU3-0-SO-MRL-15G-0	
9/29/2015	OU3-0-SO-MRL-15G-0.501	
9/29/2015	OU3-0-SO-MRL-15H-0	
9/29/2015	OU3-0-SO-MRL-15H-0.501	
9/29/2015	OU3-9-SO-MRL-15H-0.501	Field duplicate
9/29/2015	OU3-0-SO-MRL-15I-0	
9/29/2015	OU3-0-SO-MRL-15I-0.501	
9/29/2015	OU3-0-SO-MRL-15I-1.5	
9/29/2015	OU3-0-SO-MRL-15J-0	

Sample Date	Sample	Note
9/29/2015	OU3-0-SO-MRL-15J-0.501	
9/29/2015	OU3-0-SO-MRL-15J-1.9	
9/29/2015	OU3-0-SO-MRL-15K-0	
9/29/2015	OU3-0-SO-MRL-15K-0.501	
	OU3-SO-MRL-16C	inaccessible
9/30/2015	OU3-0-SO-MRL-16D-0	
9/30/2015	OU3-0-SO-MRL-16D-0.501	
9/30/2015	OU3-9-SO-MRL-16D-0.501	Field duplicate
9/30/2015	OU3-0-SO-MRL-16D-02	
	OU3-SO-MRL-16E	inaccessible
9/28/2015	OU3-0-SO-MRL-16F-0	
9/28/2015	OU3-0-SO-MRL-16F-0.501	
9/28/2015	OU3-0-SO-MRL-16F-2.7	
9/28/2015	OU3-0-SO-MRL-16G-0	
9/28/2015	OU3-0-SO-MRL-16G-0.501	
9/28/2015	OU3-0-SO-MRL-16H-0	
9/28/2015	OU3-0-SO-MRL-16H-0.501	
9/28/2015	OU3-0-SO-MRL-16I-0	
9/28/2015	OU3-0-SO-MRL-16I-0.501	
9/28/2015	OU3-0-SO-MRL-16I-1.5	
9/28/2015	OU3-0-SO-MRL-16J-0	
9/28/2015	OU3-0-SO-MRL-16J-0.501	
9/28/2015	OU3-9-SO-MRL-16J-0.501	Field duplicate
9/29/2015	OU3-0-SO-MRL-16K-0	
9/29/2015	OU3-0-SO-MRL-16K-0.501	
9/29/2015	OU3-9-SO-MRL-16K-0.501	Field duplicate
9/29/2015	OU3-0-SO-MRL-16K-1.9	
	OU3-SO-MRL-17E	inaccessible
	OU3-SO-MRL-17F	inaccessible
9/29/2015	OU3-0-SO-MRL-17G-0	
9/29/2015	OU3-0-SO-MRL-17G-0.501	
9/29/2015	OU3-0-SO-MRL-17H-0	
9/29/2015	OU3-0-SO-MRL-17H-0.501	
9/29/2015	OU3-0-SO-MRL-18F-0	only two samples (difficult conditions)
9/29/2015	OU3-0-SO-MRL-18F-2.7	
9/29/2015	OU3-0-SO-MRL-18G-0	

Sample Date	Sample	Note
9/29/2015	OU3-0-SO-MRL-18G-0.501	
9/29/2015	OU3-0-SO-MRL-19G-0	
9/29/2015	OU3-0-SO-MRL-19G-0.501	
	OU3-SO-MRU-10A	upland
9/30/2015	OU3-0-SO-MRU-10B-0	
9/30/2015	OU3-0-SO-MRU-10B-0.501	
10/1/2015	OU3-0-SO-MRU-10C-0	
10/1/2015	OU3-0-SO-MRU-10C-0.501	
10/1/2015	OU3-0-SO-MRU-10C-03	
	OU3-SO-MRU-10D	inaccessible
	OU3-SO-MRU-11B	inaccessible
10/1/2015	OU3-0-SO-MRU-11C-0	relocated
10/1/2015	OU3-0-SO-MRU-11C-0.501	relocated
10/1/2015	OU3-0-SO-MRU-11C-3.7	
	OU3-SO-MRU-11D	inaccessible
9/30/2015	OU3-0-SO-MRU-12B-0	limited sampling conditions
9/30/2015	OU3-0-SO-MRU-12B-0.501	limited sampling conditions
9/30/2015	OU3-0-SO-MRU-12B-04	
10/1/2015	OU3-0-SO-MRU-12C-0	
10/1/2015	OU3-0-SO-MRU-12C-0.501	
10/1/2015	OU3-0-SO-MRU-12C-4.3	
	OU3-SO-MRU-12D	inaccessible
10/1/2015	OU3-0-SO-MRU-12E-0	
10/1/2015	OU3-0-SO-MRU-12E-0.501	
10/1/2015	OU3-0-SO-MRU-12E-1.5	
9/30/2015	OU3-0-SO-MRU-13B-0	
9/30/2015	OU3-0-SO-MRU-13B-0.501	
10/1/2015	OU3-0-SO-MRU-13C-0	
10/1/2015	OU3-0-SO-MRU-13C-0.501	
10/1/2015	OU3-0-SO-MRU-13C-055.5	
	OU3-SO-MRU-13D	inaccessible
	OU3-SO-MRU-5B	limited sampling conditions
	OU3-SO-MRU-5C	limited sampling conditions
	OU3-SO-MRU-7A	upland
9/30/2015	OU3-0-SO-MRU-7B-0	
9/30/2015	OU3-0-SO-MRU-7B-0.501	
9/30/2015	OU3-0-SO-MRU-7B-4.7	
9/30/2015	OU3-0-SO-MRU-7C-0	limited sampling conditions
9/30/2015	OU3-0-SO-MRU-7C-0.501	limited sampling conditions

Sample Date	Sample	Note
10/1/2015	OU3-0-SO-MRU-7D-0	
10/1/2015	OU3-0-SO-MRU-7D-0.501	
10/1/2015	OU3-9-SO-MRU-7D-0.501	Field duplicate
	OU3-SO-MRU-8A	inaccessible
9/30/2015	OU3-0-SO-MRU-8B-0	limited sampling conditions
9/30/2015	OU3-0-SO-MRU-8B-0.501	limited sampling conditions
10/1/2015	OU3-0-SO-MRU-8C-0	
10/1/2015	OU3-0-SO-MRU-8C-0.501	
10/1/2015	OU3-0-SO-MRU-8C-1.2	
10/1/2015	OU3-0-SO-MRU-8D-0	
10/1/2015	OU3-0-SO-MRU-8D-0.501	
	OU3-SO-MRU-9A	upland
9/30/2015	OU3-0-SO-MRU-9B-0	surface sample only (bedrock)
	OU3-SO-MRU-9C	inaccessible
	OU3-SO-MRU-9D	inaccessible
9/21/2015	OU3-0-SO-NR-10I-0.501	
9/21/2015	OU3-9-SO-NR-10I-0.501	Field duplicate
9/21/2015	OU3-0-SO-NR-10I-1.5	
	OU3-SO-NR-11G	inaccessible
9/21/2015	OU3-0-SO-NR-11J-0	
9/21/2015	OU3-0-SO-NR-11J-0.501	
9/21/2015	OU3-0-SO-NR-11J-02	
9/21/2015	OU3-0-SO-NR-11M-0.501	
9/21/2015	OU3-0-SO-NR-11M-1.5	
10/5/2015	OU3-0-SO-NR-12Q-0	
10/5/2015	OU3-0-SO-NR-12Q-0.501	
9/18/2015	OU3-0-SO-NR-13L-0	
9/18/2015	OU3-0-SO-NR-13L-0.501	
9/18/2015	OU3-0-SO-NR-13M-0	
9/18/2015	OU3-0-SO-NR-13M-0.501	
9/18/2015	OU3-0-SO-NR-13M-02	
9/18/2015	OU3-0-SO-NR-14M-0	
9/18/2015	OU3-0-SO-NR-14M-0.501	
9/18/2015	OU3-0-SO-NR-14M-2.2	
9/18/2015	OU3-9-SO-NR-14M-2.2	Field duplicate
9/21/2015	OU3-0-SO-NR-14P-0	
9/21/2015	OU3-0-SO-NR-14P-0.501	
9/17/2015	OU3-0-SO-NR-15K-0.501	

Sample Date	Sample	Note
9/17/2015	OU3-0-SO-NR-15K-1.7	
9/17/2015	OU3-0-SO-NR-15M-0	
9/17/2015	OU3-0-SO-NR-15M-0.501	
9/17/2015	OU3-0-SO-NR-15M-2.7	
9/21/2015	OU3-0-SO-NR-15P-0	
9/21/2015	OU3-0-SO-NR-15P-04	
9/21/2015	OU3-0-SO-NR-15PI-0.501	
9/17/2015	OU3-0-SO-NR-16K-0.501	relocated
9/17/2015	OU3-0-SO-NR-16K-3.1	relocated
9/22/2015	OU3-0-SO-NR-2C-0	
9/22/2015	OU3-0-SO-NR-2C-0.501	
9/22/2015	OU3-0-SO-NR-2E-0.501	
9/22/2015	OU3-0-SO-NR-2E-02	
9/22/2015	OU3-0-SO-NR-2F-0	
9/22/2015	OU3-0-SO-NR-2F-0.501	
9/22/2015	OU3-0-SO-NR-3F-0	
9/22/2015	OU3-0-SO-NR-3F-0.501	
9/22/2015	OU3-0-SO-NR-3F-1.5	
9/22/2015	OU3-9-SO-NR-3F-1.5	Field duplicate
9/22/2015	OU3-0-SO-NR-4H-0.501	
9/22/2015	OU3-0-SO-NR-4H-02	
9/22/2015	OU3-0-SO-NR-4J-0	
9/22/2015	OU3-0-SO-NR-4J-0.501	
9/21/2015	OU3-0-SO-NR-7I-0	
9/21/2015	OU3-0-SO-NR-7I-0.501	
9/21/2015	OU3-0-SO-NR-8I-0.501	
9/21/2015	OU3-0-SO-NR-8I-2.6	
9/22/2015	OU3-0-SO-NR-9G-0.501	
9/22/2015	OU3-9-SO-NR-9G-0.501	Field duplicate
9/22/2015	OU3-0-SO-NR-9G-2.5	
9/21/2015	OU3-0-SO-NR-9J-0	
9/21/2015	OU3-0-SO-NR-9J-4.5	
9/24/2015	OU3-0-SO-NR-9K-0.501	

Sample Date	Sample	Note
9/24/2015	OU3-0-SO-NR-9K-1.8	
8/4/2015	OU3-0-SO-WR-1B-0	
8/4/2015	OU3-0-SO-WR-1B-0.501	
8/4/2015	OU3-0-SO-WR-1B-4.5	
7/31/2015	OU3-0-SO-WR-1F-0	
7/31/2015	OU3-0-SO-WR-1F-0.501	
7/31/2015	OU3-0-SO-WR-1F-4.5	
8/4/2015	OU3-0-SO-WR-2B-0	
8/4/2015	OU3-0-SO-WR-2B-0.501	
8/4/2015	OU3-0-SO-WR-2B-05	
7/31/2015	OU3-0-SO-WR-2F-0	
7/31/2015	OU3-0-SO-WR-2F-0.501	
7/31/2015	OU3-0-SO-WR-2F-4.5	
8/4/2015	OU3-0-SO-WR-3B-0.501	
8/4/2015	OU3-0-SO-WR-3B-6.5	
7/31/2015	OU3-0-SO-WR-3C-0.501	
7/31/2015	OU3-0-SO-WR-3C-5.3	
7/31/2015	OU3-0-SO-WR-3E-0.501	
7/31/2015	OU3-0-SO-WR-3E-4.2	
8/4/2015	OU3-0-SO-WR-5B-0	
8/4/2015	OU3-0-SO-WR-5B-0.501	
8/4/2015	OU3-0-SO-WR-5B-5.8	
8/4/2015	OU3-9-SO-WR-5B-5.8	Field duplicate
7/31/2015	OU3-0-SO-WR-5F-0	
7/31/2015	OU3-9-SO-WR-5F-0	Field duplicate
7/31/2015	OU3-0-SO-WR-5F-0.501	
7/31/2015	OU3-0-SO-WR-5F-06	

1.6 SURFACE WATER (SW)

Where possible, surface water flows were measured when surface water samples were collected so that metals loading could be determined for risk evaluation purposes. A summary table of surface water flow measurements is available upon request.

In August/ September, flow was not measured at eleven locations due to insufficient water quantity:

- OU3-SW-SCAOU4
- OU3-SW-MRUBP
- OU3-SW-SCURTFB

- OU3-SW-SCRFR
- OU1-SW-PFOU1
- OU3-SW-SC248AC
- OU2-SW-ASCWWT
- OU2-SW-AIRF
- OU2-SW-SCBNPRR
- OU3-SW-SCHFTR
- OU3-SW-SCRF72

In August/ September, no laboratory samples, flow, and field water quality measurements were collected from four piezometers due to insufficient water:

- OU3-SW-SCBOU4
- OU3-SW-SCO3BC
- OU3-SW-SC248NRB
- OU2-SW-IRF

In October, flow was not measured at three locations due to insufficient water quantity:

- OU1-SW-PFOU1
- OU3-SW-SC248AC
- OU2-SW-ASCWWT

In October, no laboratory samples, flow, and field water quality measurements were collected from three piezometers due to insufficient water:

- OU3-SW-SCO3BC
- OU2-SW-IRF
- OU2-SW-AIRF: No additional inflow

Based on review of first quarter laboratory data and concurrence with EPA oversight, no water samples, flow data, or field water quality measurements were collected:

- OU3-SW-HS
- OU3-SW-NGCF

Table 10 - Surface Water Samples

Sample Date	Sample	Note
9/1/2015	OU1-0-SW-PFOU1	no water flow present
10/9/2015	OU1-0-SW-PFOU1	no water flow present

Sample Date	Sample	Note
8/31/2015	OU2-0-SW-AIRF	no water flow present
October	OU2-SW-AIRF	insufficient water
8/31/2015	OU2-0-SW-ASCWWT	no water flow present
10/8/2015	OU2-0-SW-ASCWWT	no water flow present
8/31/2015	OU2-0-SW-BIRF	
10/8/2015	OU2-0-SW-BIRF	
August	OU2-SW-IRF	insufficient water
October	OU2-SW-IRF	insufficient water
9/1/2015	OU2-0-SW-SCBNPRR	
9/1/2015	OU2-9-SW-SCBNPRR	Field duplicate, no water flow present
10/8/2015	OU2-0-SW-SCBNPRR	
8/31/2015	OU2-0-SW-SCI	
10/8/2015	OU2-0-SW-SCI	
8/31/2015	OU2-0-SW-SCI80	
8/31/2015	OU2-9-SW-SCI80	Field duplicate
10/8/2015	OU2-0-SW-SCI80	
10/8/2015	OU2-9-SW-SCI80	Field duplicate
8/31/2015	OU2-0-SW-SCWWT	
10/8/2015	OU2-0-SW-SCWWT	
	OU3-SW-HS	by EPA agreement
9/2/2015	OU3-0-SW-MRUBP	no water flow present
	OU3-SW-NGCF	by EPA agreement
8/31/2015	OU3-0-SW-NPCWR	
10/8/2015	OU3-0-SW-NPCWR	
9/1/2015	OU3-0-SW-SC1C	
10/8/2015	OU3-0-SW-SC1C	
9/1/2015	OU3-0-SW-SC248AC	no water flow present
10/9/2015	OU3-0-SW-SC248AC	no water flow present
9/1/2015	OU3-0-SW-SC248BC	
10/9/2015	OU3-0-SW-SC248BC	
10/9/2015	OU3-9-SW-SC248BC	Field duplicate
August	OU3-SW-SC248NRB	insufficient water
10/8/2015	OU3-0-SW-SC248NRB	
9/2/2015	OU3-0-SW-SCAOU4	no water flow present
August	OU3-SW-SCBOU4	insufficient water
9/1/2015	OU3-0-SW-SCHFTR	no water flow present
10/9/2015	OU3-0-SW-SCHFTR	

Sample Date	Sample	Note
October	OU3-SW-SCOU4BC	insufficient water
August	OU3-SW-SCOU4BC	insufficient water
9/1/2015	OU3-0-SW-SCRF72	no water flow present
10/9/2015	OU3-0-SW-SCRF72	
9/1/2015	OU3-0-SW-SCRFR	no water flow present
9/2/2015	OU3-0-SW-SCURTFB	no water flow present
9/2/2015	OU3-9-SW-SCURTFB	Field duplicate
8/31/2015	OU3-0-SW-SPCWR	
10/8/2015	OU3-0-SW-SPCWR	

1.7 TAILINGS (TL)

Table 11 - Tailing Samples

Sample Date	Sample	Note
9/30/2015	OU3-0-TL-MRU-7B	

1.8 VEGETATION (VG)

Table 12 - Vegetation Samples

Sample Date	Sample	Note
7/27/2015	OU2-0-VG-BIRF	
7/27/2015	OU2-0-VG-IRF	
7/28/2015	OU2-0-VG-SCBNPRR	
7/27/2015	OU2-0-VG-SCI	
7/27/2015	OU2-9-VG-SCI	Field duplicate
7/28/2015	OU2-0-VG-SCWWT	
7/28/2015	OU2-9-VG-SCWWT	Field duplicate
7/28/2015	OU3-0-VG-MRUBP	
7/28/2015	OU3-0-VG-NPCWR	
7/28/2015	OU3-0-VG-SC1C	
7/28/2015	OU3-0-VG-SC248AC	
7/28/2015	OU3-0-VG-SC248NRB	
7/28/2015	OU3-0-VG-SCRF72	
7/28/2015	OU3-0-VG-SCRFR	
7/28/2015	OU3-0-VG-SCURTFB	
7/28/2015	OU3-0-VG-SPCWWR	

APPENDIX 2 – DATA INVENTORY

Appendix 2 correlates sample ID with Laboratory ID by date. Sample type is denoted by a sample type code: 0=normal samples; 9= field duplicate. Sample media is denoted by a two character sample media code: VG=vegetation; SD=sediment; SO=soil; TL=tailings; BM=benthic macro invertebrate; FI=fish; SW=surface water; GW=groundwater

Sample Date: 7/27/2015		Sample Date: 7/28/2015		Sample Date: 7/29/2015	
Field Sample ID	Laboratory Sample ID	Field Sample ID	Laboratory Sample ID	Field Sample ID	Laboratory Sample ID
OU2-0-VG-SCI	1507501-001	OU2-0-VG-SCWWT	1507501-005	OU2-0-SO-OP1-022.5	1507540-014
OU2-9-VG-SCI	1507501-002	OU2-9-VG-SCWWT	1507501-006	OU2-0-SO-OP1-0	1507540-015
OU2-0-VG-BIRF	1507501-003	OU3-0-VG-NPCWR	1507501-007	OU2-0-SO-OP1-0.501	1507540-016
OU2-0-VG-IRF	1507501-004	OU3-0-VG-SPCWR	1507501-008	OU2-0-SO-51P-0.501	1507540-017
OU2-0-SD-SCI	1507540-001	OU2-0-VG-SCBNPWR	1507501-009	OU2-0-SO-50P-0	1507540-018
OU2-9-SD-SCI	1507540-002	OU3-0-VG-SC248NRB	1507501-010	OU2-9-SO-50P-0	1507540-019
OU2-0-SD-BIRF	1507540-003	OU3-0-VG-SC1C	1507501-011	OU2-0-SO-50Q-0	1507540-020
OU2-0-SD-IRF	1507540-004	OU3-0-VG-SC248AC	1507501-012	OU2-0-SO-50Q-0.501	1507540-021
		OU3-0-VG-SCRFT2	1507501-013	OU2-0-SO-50Q-04	1507540-022
		OU3-0-VG-SCURTFB	1507501-014	OU2-0-SO-50R-0.501	1507540-023
		OU3-0-VG-MRUBPP	1507501-015	OU2-0-SO-50R-6.807	1507540-024
		OU3-0-VG-SCRFR	1507501-016		
		OU2-0-SD-SCWWT	1507540-005		
		OU2-9-SD-SCWWT	1507540-006		
		OU3-0-SD-NPCWR	1507540-007		
		OU3-0-SD-SPCWR	1507540-008		
		OU2-0-SD-SCBNPWR	1507540-009		
		OU3-0-SD-SC248NRB	1507540-010		
		OU3-0-SD-SC1C	1507540-011		
		OU3-0-SD-SC248AC	1507540-012		
		OU3-0-SD-SCRFT2	1507540-013		

Sample Date: 7/30/2015		Sample Date: 7/31/2015		Sample Date: 8/4/2015	
Field Sample ID	Laboratory Sample ID	Field Sample ID	Laboratory Sample ID	Field Sample ID	Laboratory Sample ID
OU2-0-SO-46R-0.501	1507540-025	OU2-0-SO-44W-0	1508019-011	OU2-0-SO-32R-1.5	1508082-001
OU2-0-SO-46R-6.8	1507540-026	OU2-0-SO-44W-0.501	1508019-012	OU2-0-SO-32R-0.501	1508082-002
OU2-0-SO-50T-0	1507540-027	OU2-0-SO-44W-2.5	1508019-013	OU2-0-SO-31L-2.5	1508082-003
OU2-0-SO-50T-0.501	1507540-028	OU2-0-SO-44V-0	1508019-014	OU2-0-SO-31L-0.501	1508082-004
OU2-0-SO-48T-0	1507540-029	OU2-0-SO-44V-0.501	1508019-015	OU2-0-SO-37S-02	1508082-005
OU2-0-SO-48T-0.501	1507540-030	OU2-0-SO-44V-6.5	1508019-016	OU2-0-SO-37S-0.501	1508082-006
OU2-0-SO-48T-04	1507540-031	OU3-0-SO-WR-5F-0	1508019-017	OU2-0-SO-34N-1.8	1508082-007
OU2-0-SO-48S-0	1507540-032	OU3-9-SO-WR-5F-0	1508019-018	OU2-0-SO-34N-0.501	1508082-008
OU2-0-SO-48S-0.501	1507540-033	OU3-0-SO-WR-5F-0.501	1508019-019	OU2-0-SO-32N-02	1508082-009
OU2-0-SO-48S-5.2	1507540-034	OU3-0-SO-WR-5F-06	1508019-020	OU2-0-SO-32N-0.501	1508082-010
OU2-9-SO-48S-5.2	1507540-035	OU3-0-SO-WR-3E-0.501	1508019-021	OU2-0-SO-33N-1.5	1508082-011
OU2-0-SO-47T-0	1507540-036	OU3-0-SO-WR-3E-4.2	1508019-022	OU2-0-SO-33N-0.501	1508082-012
OU2-0-SO-47T-0.501	1507540-037	OU3-0-SO-WR-3C-0.501	1508019-023	OU2-0-SO-34S-2.5	1508082-013
OU2-0-SO-47T-5.9	1507540-038	OU3-0-SO-WR-3C-5.3	1508019-024	OU2-9-SO-34S-0.501	1508082-014
OU2-0-SO-46T-0.501	1508019-001	OU3-0-SO-WR-2F-0	1508019-025	OU2-0-SO-34S-0.501	1508082-015
OU2-0-SO-46T-05	1508019-002	OU3-0-SO-WR-2F-0.501	1508019-026	OU2-0-SO-35S-1.8	1508082-016
OU2-0-SO-46V-0	1508019-003	OU3-0-SO-WR-2F-4.5	1508019-027	OU2-0-SO-35S-0.501	1508082-017
OU2-0-SO-46V-0.501	1508019-004	OU3-0-SO-WR-1F-0	1508019-028	OU2-0-SO-39V-1.5	1508082-018
OU2-0-SO-46V-6.1	1508019-005	OU3-0-SO-WR-1F-0.501	1508019-029	OU2-0-SO-39V-0.501	1508082-019
OU2-0-SO-45V-0	1508019-006	OU3-0-SO-WR-1F-4.5	1508019-030	OU2-0-SO-39V-0	1508082-020
OU2-0-SO-45V-0.501	1508019-007			OU2-0-SO-39S-0.501	1508082-021
OU2-0-SO-45V-3.6	1508019-008			OU2-0-SO-43T-0.501	1508082-022
OU2-0-SO-45T-0	1508019-009			OU2-0-SO-43T-0	1508082-023
OU2-0-SO-45T-0.501	1508019-010			OU3-0-SO-WR-5B-5.8	1508082-024
				OU3-0-SO-WR-5B-0.501	1508082-025
				OU3-0-SO-WR-5B-0	1508082-026
				OU3-9-SO-WR-5B-5.8	1508082-027
				OU3-0-SO-WR-3B-6.5	1508082-028
				OU3-0-SO-WR-3B-0.501	1508082-029
				OU3-0-SO-WR-2B-05	1508082-030
				OU3-0-SO-WR-2B-0.501	1508082-031
				OU3-0-SO-WR-2B-0	1508082-032
				OU3-0-SO-WR-1B-4.5	1508082-033
				OU3-0-SO-WR-1B-0.501	1508082-034
				OU3-0-SO-WR-1B-0	1508082-035

Sample Date: 8/5/2015		Sample Date: 8/6/2015		Sample Date: 8/13/2015	
Field Sample ID	Laboratory Sample ID	Field Sample ID	Laboratory Sample ID	Field Sample ID	Laboratory Sample ID
OU3-0-SO-ER-4Q-1.7	1508082-036	OU3-0-SO-ER-5G-0	1508110-001	OU2-0-FI-BIRF-RS2	1508273-001
OU3-0-SO-ER-4Q-0.501	1508082-037	OU3-0-SO-ER-5A-0	1508110-002	OU2-0-FI-BIRF-RS1	1508273-002
OU3-0-SO-ER-4Q-0	1508082-038	OU3-0-SO-ER-5A-0.501	1508110-003	OU2-0-FI-BIRF-MIX	1508273-003
OU3-0-SO-ER-1N-02	1508082-039	OU3-0-SO-ER-5A-02	1508110-004	OU3-9-FI-NPCWWR-MIX	1508273-004
OU3-0-SO-ER-1N-0.501	1508082-040	OU3-0-SO-ER-4D-0.501	1508110-005	OU3-0-FI-NPCWWR-RS1	1508273-005
OU3-0-SO-ER-1J-1.6	1508082-041	OU3-0-SO-ER-4D-2.1	1508110-006	OU3-0-FI-NPCWWR-SD2	1508273-006
OU3-0-SO-ER-1J-0.501	1508082-042	OU3-0-SO-ER-3E-0.501	1508110-007	OU3-0-FI-NPCWWR-SD1	1508273-007
OU3-9-SO-ER-1J-0.501	1508082-043	OU3-0-SO-ER-3E-02	1508110-008		
OU2-0-SO-34G-0	1508082-044	OU3-0-SO-ER-2D-0.501	1508110-009		
OU2-0-SO-34G-0.501	1508082-045	OU3-0-SO-ER-2D-1.5	1508110-010		
OU2-0-SO-33F-1.4	1508082-046	OU3-0-SO-ER-2H-0.501	1508110-011		
OU2-0-SO-33F-0.501	1508082-047	OU3-0-SO-ER-2H-1.8	1508110-012		
OU2-0-SO-33I-1.3	1508082-048	OU3-0-SO-ER-3H-0.501	1508110-013		
OU2-0-SO-33I-0.501	1508082-049	OU3-0-SO-ER-3H-2.1	1508110-014		
OU2-0-SO-33L-0.501	1508082-050	OU3-0-SO-ER-3M-0	1508110-015		
OU2-0-SO-37V-0	1508082-051	OU3-0-SO-ER-3M-0.501	1508110-016		
OU2-0-SO-37V-0.501	1508082-052	OU3-0-SO-ER-3M-02	1508110-017		
OU2-0-SO-35V-0.501	1508082-053	OU3-9-SO-ER-3M-02	1508110-018		
OU2-0-SO-35V-0	1508082-054				
OU2-0-SO-34Z-05	1508082-055				
OU2-0-SO-34Z-0.501	1508082-056				
OU2-0-SO-33X-3.2	1508082-057				
OU2-0-SO-33X-0.501	1508082-058				
OU2-0-SO-31X-6.7	1508082-059				
OU2-0-SO-31X-0.501	1508082-060				
OU2-9-SO-32V-0.501	1508082-061				
OU2-0-SO-32V-0.501	1508082-062				
OU2-0-SO-32V-2.6	1508082-063				

Sample Date: 8/17/2015		Sample Date: 8/18/2015		Sample Date: 8/19/2015	
Field Sample ID	Laboratory Sample ID	Field Sample ID	Laboratory Sample ID	Field Sample ID	Laboratory Sample ID
OU2-0-FI-SCBNPWR-RS1	1508366-001	OU3-0-BM-SPCWR	1508366-010	OU2-0-FI-SCI-SD1	1508394-001
OU2-0-FI-SCBRNPWR-RS2	1508366-002			OU2-0-FI-SCI-SD2	1508394-002
OU2-0-FI-SCBNPWR-SD1	1508366-003			OU3-0-BM-NPCWR	1508394-003
OU2-9-FI-SCBNPWR-SD1	1508366-004			Composite of 8/19/15 & 8/18/15	
OU2-0-BM-SCBNPWR	1508366-005			OU3-9-BM-NPCWR	1508394-004
OU2-9-BM-SCBNPWR	1508366-006			OU2-0-FI-SCWWWT-RS1	1508394-005
OU3-0-FI-SPCWR-SD1	1508366-007			OU2-0-FI-SCWWWT-SD2	1508394-006
OU3-0-FI-SPCWR-SD2	1508366-008			OU2-0-FI-SCWWWT-SD1	1508394-007
OU3-0-FI-SPCWR-RS1	1508366-009				

Sample Date: 8/20/2015		Sample Date: 8/21/2015		Sample Date: 8/25/2015	
Field Sample ID	Laboratory Sample ID	Field Sample ID	Laboratory Sample ID	Field Sample ID	Laboratory Sample ID
OU2-0-BM-SCWWWT	1508441-002	OU3-0-BM-SC1C	1508441-001	OU2-0-GW-P2-5	1508512-001
Composite of 8/19/15 & 8/20/2015				OU2-9-GW-P2-5	1508512-002
				OU3-0-GW-T6E1350	1508512-003
				OU3-0-GW-P2-1(A)	1508512-004
				OU3-0-GW-T6W0625	1508512-005
				OU2-0-GW-TSE0875	1508512-006
				OU2-0-GW-P2-2(B)	1508512-007
				OU2-0-GW-P2-2(A)	1508512-008

Sample Date: 8/26/2015		Sample Date: 8/27/2015		Sample Date: 8/31/2015	
Field Sample ID	Laboratory Sample ID	Field Sample ID	Laboratory Sample ID	Field Sample ID	Laboratory Sample ID
OU2-0-GW-P2-4	1508530-001	OU3-0-GW-FPT-6A	1508543-001	OU2-0-SW-SCI80	1509027-001, 1509256-001
OU2-9-GW-P2-4	1508530-002	OU3-9-GW-FPT-6A	1508543-002	OU2-9-SW-SCI80	1509027-002, 1509256-002
OU3-0-GW-T3W0375	1508530-003	OU3-0-GW-MR-5	1508543-003	OU2-0-SW-SCI	1509027-003, 1509256-003
OU3-0-GW-T2E0125	1508530-004	OU3-0-GW-MR-3	1508543-004	OU2-0-SW-BIRF	1509027-004, 1509256-004
OU2-0-GW-T4E0875	1508530-005			OU2-0-SW-AIRF	1509027-005, 1509256-005
OU2-0-GW-T3E0125	1508530-006			OU2-0-SW-SCWWWT	1509027-006, 1509256-006
OU3-0-GW-T1E0125	1508530-007			OU2-0-SW-ASCWWWT	1509027-007, 1509256-007
OU3-0-GW-RT-11	1508530-008			OU3-0-SW-NPCWR	1509027-008, 1509256-008
OU3-0-GW-MR-6	1508530-009			OU3-0-SW-SPCWR	1509027-009, 1509256-009

Sample Date: 9/1/2015		Sample Date: 9/2/2015		Sample Date: 9/3/2015	
Field Sample ID	Laboratory Sample ID	Field Sample ID	Laboratory Sample ID	Field Sample ID	Laboratory Sample ID
OU2-0-SW-SCBNP RRR	1509027-010, 1509283-007	OU3-0-SW-SCURTFB	1509314-001, 1509092-001	OU3-0-FI-SCRFT2-RS1	1509157-001
OU2-9-SW-SCBNP RRR	1509027-011, 1509283-008	OU3-9-SW-SCURTFB	1509314-002, 1509092-002	OU3-0-FI-SCRFT2-RS2	1509157-002
OU3-0-SW-SC1C	1509027-012, 1509283-009	OU3-0-SW-MRUBP	1509314-003, 1509092-003	OU3-0-BM-SCRFT2	1509157-003
OU3-0-SW-SC248AC	1509027-013, 1509283-001	OU3-0-SW-SCAOU4	1509314-004, 1509092-004	OU3-0-BM-SCRFR	1509157-004
OU3-0-SW-SC248BC	1509027-014, 1509283-002			OU3-0-FI-SCRFR-MS1	1509157-005
OU1-0-SW-PFOU1	1509027-015, 1509283-003			OU3-0-FI-SCRFR-MS2	1509157-006
OU3-0-SW-SCRFT2	1509027-016, 1509283-004			OU3-0-FI-SCRFR-MIX	1509157-007
OU3-0-SW-SCHFTR	1509027-017, 1509283-005				
OU3-0-SW-SCRFR	1509027-018, 1509283-006				

Sample Date: 9/4/2015		Sample Date: 9/8/2015		Sample Date: 9/9/2015	
Field Sample ID	Laboratory Sample ID	Field Sample ID	Laboratory Sample ID	Field Sample ID	Laboratory Sample ID
OU3-0-BM-MRUBP	1509157-008	OU2-0-BM-SCI	1509209-001	OU3-0-BM-SC248AC	1509209-003
OU3-0-BM-SCURTFB	1509157-009	OU2-0-BM-BIRF	1509209-002		

Sample Date: 9/10/2015		Sample Date: 9/11/2015		Sample Date: 9/14/2015	
Field Sample ID	Laboratory Sample ID	Field Sample ID	Laboratory Sample ID	Field Sample ID	Laboratory Sample ID
OU3-0-SO-ER-5G-0.501	1509397-001	OU3-0-SO-ER-9Q-0.501	1509478-001	OU3-0-SO-ER-12R-0	1509513-001
OU3-9-SO-ER-5G-0.501	1509397-002	OU3-9-SO-ER-9Q-0.501	1509478-002	OU3-0-SO-ER-12R-0.501	1509513-002
OU3-0-SO-ER-5G-02	1509397-003	OU3-0-SO-ER-9Q-02	1509478-003	OU3-9-SO-ER-12R-0.501	1509513-003
OU3-0-SO-ER-6H-0.501	1509397-004	OU3-0-SO-ER-10Q-0.501	1509478-004	OU3-0-SO-ER-11Q-0.501	1509513-004
OU3-0-SO-ER-6H-1.7	1509397-005	OU3-0-SO-ER-10Q-1.8	1509478-005	OU3-0-SO-ER-11Q-1.8	1509513-005
OU3-0-SO-ER-7J-0	1509397-006	OU3-0-SO-ER-10S-0	1509478-006	OU2-0-SO-44T-0	1509513-006
OU3-0-SO-ER-7J-0.501	1509397-007	OU3-0-SO-ER-10S-0.501	1509478-007	OU2-0-SO-44T-0.501	1509513-007
OU3-0-SO-ER-7O-0.501	1509397-008	OU3-0-SO-ER-10S-1.6	1509478-008	OU2-0-SO-44T-5.5	1509513-008
OU3-0-SO-ER-7O-02	1509397-009	OU3-0-SO-ER-11S-0	1509478-009	OU3-0-SO-ER-11D-0	1509513-009
OU3-0-SO-ER-6N-0.501	1509397-010	OU3-0-SO-ER-11S-0.501	1509478-010	OU3-0-SO-ER-11D-0.501	1509513-010
OU3-0-SO-ER-6N-02	1509397-011			OU3-0-SO-ER-11D-1.9	1509513-011
OU3-0-SO-ER-5K-0	1509397-012			OU3-0-SO-ER-8A-0	1509513-012
OU3-0-SO-ER-5K-0.501	1509397-013			OU3-0-SO-ER-8A-0.501	1509513-013
OU3-0-SO-ER-5K-1.9	1509397-014			OU3-0-SO-ER-6A-0	1509513-014
OU3-0-SO-ER-4H-0.501	1509397-015			OU3-0-SO-ER-6A-0.501	1509513-015
OU3-0-SO-ER-4H-1.5	1509397-016			OU3-0-SO-ER-6D-0.501	1509513-016
OU3-0-SO-ER-4N-0.501	1509397-017			OU3-0-SO-ER-6D-1.5	1509513-017
OU3-0-SO-ER-4N-1.5	1509397-018			OU3-0-SO-ER-1C-0.501	1509513-018
OU3-0-SO-ER-7P-0	1509397-019			OU3-0-SO-ER-1C-1.7	1509513-019
OU3-0-SO-ER-7P-0.501	1509397-020			OU3-0-SO-ER-2A-0.501	1509513-020
OU3-0-SO-ER-7P-1.9	1509397-021			OU3-0-SO-ER-2A-1.9	1509513-021
OU3-0-SO-ER-8Q-0.501	1509397-022			OU3-0-SO-ER-3C-0.501	1509513-022
OU3-0-SO-ER-8Q-1.7	1509397-023			OU3-9-SO-ER-3C-0.501	1509513-023
				OU3-0-SO-ER-3C-1.5	1509513-024
				OU3-0-SO-ER-4B-0	1509513-025
				OU3-0-SO-ER-4B-0.501	1509513-026
				OU3-0-SO-ER-4B-1.5	1509513-027
				OU2-0-SO-35N-0.501	1509513-028
				OU2-0-SO-35N-1.5	1509513-029

Sample Date: 9/15/2015		Sample Date: 9/16/2015		Sample Date: 9/17/2015	
Field Sample ID	Laboratory Sample ID	Field Sample ID	Laboratory Sample ID	Field Sample ID	Laboratory Sample ID
OU2-0-SO-24I-0.501	1509533-001	OU2-0-SO-23O-0.501	1509554-001	OU2-0-SO-18H-0.501	1509599-001
OU2-0-SO-24I-1.5	1509533-002	OU2-9-SO-23O-0.501	1509554-002	OU2-9-SO-18H-0.501	1509599-002
OU2-0-SO-29F-0	1509533-003	OU2-0-SO-23O-3.1	1509554-003	OU2-0-SO-18H-1.6	1509599-003
OU2-0-SO-29F-0.501	1509533-004	OU2-0-SO-25R-0.501	1509554-004	OU2-0-SO-17H-0.501	1509599-004
OU2-9-SO-29F-0.501	1509533-005	OU2-0-SO-25R-3.8	1509554-005	OU2-0-SO-17H-1.7	1509599-005
OU2-0-SO-30H-0.501	1509533-006	OU2-0-SO-26V-0	1509554-006	OU2-0-SO-OP2-0	1509599-006
OU2-0-SO-30H-1.5	1509533-007	OU2-0-SO-26V-0.501	1509554-007	OU2-0-SO-OP2-0.501	1509599-007
OU2-0-SO-27I-0	1509533-008	OU2-0-SO-26V-2.8	1509554-008	OU2-0-SO-17L-0	1509599-008
OU2-0-SO-27I-0.501	1509533-009	OU2-0-SO-30Y-0	1509554-009	OU2-0-SO-17L-0.501	1509599-009
OU2-0-SO-30U-0.501	1509533-010	OU2-0-SO-30Y-0.501	1509554-010	OU2-0-SO-13H-0.501	1509599-010
OU2-0-SO-30U-3.4	1509533-011	OU2-0-SO-30Y-4.6	1509554-011	OU2-0-SO-13H-1.6	1509599-011
OU2-0-SO-30R-0	1509533-012	OU2-0-SO-19W-0.501	1509554-012	OU2-0-SO-16H-0.501	1509599-012
OU2-0-SO-30R-0.501	1509533-013	OU2-0-SO-19W-1.6	1509554-013	OU2-0-SO-16H-1.5	1509599-013
OU2-0-SO-30R-03	1509533-014	OU2-0-SO-140-0.501	1509554-014	OU2-0-SO-15L-0	1509599-014
OU2-0-SO-28P-0.501	1509533-015	OU2-0-SO-140-1.5	1509554-015	OU2-0-SO-15L-0.501	1509599-015
OU2-0-SO-28P-1.7	1509533-016	OU2-0-SO-12N-0.501	1509554-016	OU2-0-SO-15L-3.8	1509599-016
OU2-0-SO-28N-0.501	1509533-017	OU2-0-SO-12N-2.3	1509554-017	OU2-0-SO-12I-0	1509599-017
OU2-0-SO-28N-1.6	1509533-018	OU2-0-SO-15N-0	1509554-018	OU2-0-SO-12I-0.501	1509599-018
OU2-0-SO-28L-0.501	1509533-019	OU2-0-SO-15N-0.501	1509554-019	OU2-0-SO-12I-2.5	1509599-019
OU2-0-SO-28L-1.6	1509533-020	OU2-0-SO-15N-2.5	1509554-020	OU2-0-SO-10E-0.501	1509599-020
OU2-0-SO-28O-0.501	1509533-021	OU2-0-SO-17N-0	1509554-021	OU2-0-SO-10E-1.6	1509599-021
OU2-9-SO-26O-0.501	1509533-022	OU2-0-SO-17N-0.501	1509554-022	OU2-0-SO-8G-0	1509599-022
OU2-0-SO-26O-2.7	1509533-023	OU2-0-SO-17N-2.7	1509554-023	OU2-0-SO-8G-0.501	1509599-023
OU2-0-SO-26S-0.501	1509533-024			OU2-9-SO-8G-0.501	1509599-024
OU2-0-SO-26S-2.2	1509533-025			OU2-0-SO-8G-2.7	1509599-025
				OU2-0-SO-7F-0	1509599-026
				OU2-0-SO-7F-0.501	1509599-027
				OU2-0-SO-7F-2.5	1509599-028
				OU3-0-SO-NR-15M-0	1509599-029
				OU3-0-SO-NR-15M-0.501	1509599-030
				OU3-0-SO-NR-15M-2.7	1509599-031
				OU3-0-SO-NR-15K-0.501	1509599-032
				OU3-0-SO-NR-15K-1.7	1509599-033
				OU3-0-SO-NR-16K-0.501	1509599-034
				OU3-0-SO-NR-16K-3.1	1509599-035

Sample Date: 9/18/2015		Sample Date: 9/21/2015		Sample Date: 9/22/2015	
Field Sample ID	Laboratory Sample ID	Field Sample ID	Laboratory Sample ID	Field Sample ID	Laboratory Sample ID
OU3-0-SO-NR-14M-0	1509605-001	OU3-0-SO-NR-7I-0	1509606-001	OU3-0-SO-NR-9G-0.501	1509604-001
OU3-0-SO-NR-14M-0.501	1509605-002	OU3-0-SO-NR-7I-0.501	1509606-002	OU3-9-SO-NR-9G-0.501	1509604-002
OU3-0-SO-NR-14M-2.2	1509605-003	OU3-0-SO-NR-8I-0.501	1509606-003	OU3-0-SO-NR-9G-2.5	1509604-003
OU3-9-SO-NR-14M-2.2	1509605-004	OU3-0-SO-NR-8I-2.6	1509606-004	OU2-0-SO-7C-0.501	1509604-004
OU3-0-SO-NR-13L-0	1509605-005	OU3-0-SO-NR-9J-0	1509606-005	OU2-0-SO-7C-2.4	1509604-005
OU3-0-SO-NR-13L-0.501	1509605-006	OU3-0-SO-NR-9J-4.5	1509606-006	OU2-0-SO-12B-0.501	1509604-006
OU3-0-SO-NR-13M-0	1509605-007	OU3-0-SO-NR-10I-0.501	1509606-007	OU2-0-SO-12B-1.2	1509604-007
OU3-0-SO-NR-13M-0.501	1509605-008	OU3-9-SO-NR-10I-0.501	1509606-008	OU2-0-SO-14C-0.501	1509604-008
OU3-0-SO-NR-13M-02	1509605-009	OU3-0-SO-NR-10I-1.5	1509606-009	OU2-0-SO-15D-0.501	1509604-009
		OU3-0-SO-NR-11J-0.501	1509606-010	OU2-0-SO-15D-02	1509604-010
		OU3-0-SO-NR-11J-02	1509606-011	OU2-0-SO-17F-0.501	1509604-011
		OU3-0-SO-NR-15P-0	1509606-012	OU2-0-SO-21D-0	1509604-012
		OU3-0-SO-NR-15P-0.501	1509606-013	OU2-0-SO-21D-0.501	1509604-013
		OU3-0-SO-NR-15P-04	1509606-014	OU3-0-SO-NR-2C-0	1509604-014
		OU3-0-SO-NR-14P-0	1509606-015	OU3-0-SO-NR-2C-0.501	1509604-015
		OU3-0-SO-NR-14P-0.501	1509606-016	OU3-0-SO-NR-2F-0	1509604-016
		OU3-0-SO-NR-11J-0	1509606-017	OU3-0-SO-NR-2F-0.501	1509604-017
		OU2-0-SO-8I-0	1509606-018	OU3-0-SO-NR-3F-0	1509604-018
		OU2-0-SO-8I-0.501	1509606-019	OU3-0-SO-NR-3F-0.501	1509604-019
		OU2-9-SO-8I-0.501	1509606-020	OU3-0-SO-NR-3F-1.5	1509604-020
		OU2-0-SO-8I-3.2	1509606-021	OU3-9-SO-NR-3F-1.5	1509604-021
		OU2-0-SO-10L-0	1509606-022	OU3-0-SO-NR-2E-0.501	1509604-022
		OU2-0-SO-10L-0.501	1509606-023	OU3-0-SO-NR-2E-02	1509604-023
		OU2-0-SO-10L-1.5	1509606-024	OU3-0-SO-NR-4H-0.501	1509604-024
		OU2-0-SO-12L-0	1509606-025	OU3-0-SO-NR-4H-02	1509604-025
		OU2-0-SO-12L-0.501	1509606-026	OU3-0-SO-NR-4J-0	1509604-026
		OU2-0-SO-12L-1.9	1509606-027	OU3-0-SO-NR-4J-0.501	1509604-027
		OU3-0-SO-NR-11M-0.501	1509606-028	OU2-0-SO-2A-0	1509604-028
		OU3-0-SO-NR-11M-1.5	1509606-029	OU2-0-SO-2A-0.501	1509604-029
				OU2-0-SO-2A-02	1509604-030

Sample Date: 9/24/2015		Sample Date: 9/25/2015		Sample Date: 9/28/2015	
Field Sample ID	Laboratory Sample ID	Field Sample ID	Laboratory Sample ID	Field Sample ID	Laboratory Sample ID
OU2-0-SO-3B-0	1510030-001	OU3-0-SO-FT-6D-0	1510031-001	OU3-0-SO-FT-4A-0	1510032-001
OU2-0-SO-3B-0.501	1510030-002	OU3-0-SO-FT-6D-0.501	1510031-002	OU3-0-SO-FT-4A-0.501	1510032-002
OU2-9-SO-3B-0.501	1510030-003	OU3-0-SO-FT-5E-0	1510031-003	OU3-0-SO-FT-2B-0	1510032-003
OU2-0-SO-3B-1.3	1510030-004	OU3-9-SO-FT-5E-0.501	1510031-004	OU3-0-SO-FT-2B-0.501	1510032-004
OU2-0-SO-4B-0	1510030-005	OU3-0-SO-FT-5E-0.501	1510031-005	OU3-9-SO-FT-2B-0.501	1510032-005
OU2-0-SO-4B-0.501	1510030-006	OU3-0-SO-FT-4E-0	1510031-006	OU3-0-SO-FT-2B-1.6	1510032-006
OU2-0-SO-4A-0	1510030-007	OU3-0-SO-FT-4E-0.501	1510031-007	OU3-0-SO-FT-1B-0	1510032-007
OU2-0-SO-4A-0.501	1510030-008	OU3-0-SO-FT-3D-0	1510031-008	OU3-0-SO-FT-1B-0.501	1510032-008
OU2-0-SO-4A-0.033.5	1510030-009	OU3-0-SO-FT-3D-0.501	1510031-009	OU3-0-SO-FT-1B-1.5	1510032-009
OU3-0-SO-NR-9K-0.501	1510030-010	OU3-0-SO-FT-3D-02	1510031-010	OU3-0-SO-MRL-16F-2.7	1510032-010
OU3-0-SO-NR-9K-1.8	1510030-011	OU3-0-SO-FT-5C-0	1510031-011	OU3-0-SO-MRL-16F-0.501	1510032-011
OU3-0-SO-FT-6B-0	1510030-012	OU3-0-SO-FT-5C-0.501	1510031-012	OU3-0-SO-MRL-16F-0	1510032-012
OU3-0-SO-FT-6B-0.501	1510030-013	OU3-0-SO-FT-5C-3.5	1510031-013	OU3-0-SO-MRL-16H-0	1510032-013
OU3-0-SO-FT-6B-4.505	1510030-014	OU3-0-SO-FT-4C-0	1510031-014	OU3-0-SO-MRL-16H-0.501	1510032-014
		OU3-0-SO-FT-4C-0.501	1510031-015	OU3-0-SO-MRL-16G-0	1510032-015
		OU3-0-SO-FT-4C-2.6	1510031-016	OU3-0-SO-MRL-16G-0.501	1510032-016
		OU3-0-SO-FT-3C-0	1510031-017	OU3-0-SO-MRL-16I-0	1510032-017
		OU3-0-SO-FT-3C-0.501	1510031-018	OU3-0-SO-MRL-16I-0.501	1510032-018
		OU3-0-SO-FT-3C-03	1510031-019	OU3-0-SO-MRL-16I-1.5	1510032-019
		OU3-0-SO-FT-2C-0	1510031-020	OU3-0-SO-MRL-16J-0	1510032-020
		OU3-0-SO-FT-2C-0.501	1510031-021	OU3-0-SO-MRL-16J-0.501	1510032-021
		OU3-0-SO-FT-2C-2.9	1510031-022	OU3-9-SO-MRL-16J-0.501	1510032-022
		OU3-0-SO-FT-1C-0	1510031-023		
		OU3-0-SO-FT-1C-0.501	1510031-024		
		OU3-0-SO-FT-1C-3.4	1510031-025		
		OU3-0-SO-FT-4B-0	1510031-026		
		OU3-0-SO-FT-4B-0.501	1510031-027		
		OU3-9-SO-FT-4B-0.501	1510031-028		
		OU3-0-SO-FT-4B-3.8	1510031-029		

Sample Date: 9/29/2015		Sample Date: 9/30/2015		Sample Date: 10/1/2015	
Field Sample ID	Laboratory Sample ID	Field Sample ID	Laboratory Sample ID	Field Sample ID	Laboratory Sample ID
OU3-0-SO-MRL-16K-0	1510055-001	OU3-0-SO-MRL-16D-0	1510054-001	OU3-0-SO-MRU-8C-0	1510053-001
OU3-0-SO-MRL-16K-0.501	1510055-002	OU3-0-SO-MRL-16D-0.501	1510054-002	OU3-0-SO-MRU-8C-0.501	1510053-002
OU3-9-SO-MRL-16K-0.501	1510055-003	OU3-9-SO-MRL-16D-0.501	1510054-003	OU3-0-SO-MRU-8C-1.2	1510053-003
OU3-0-SO-MRL-16K-1.9	1510055-004	OU3-0-SO-MRL-16D-02	1510054-004	OU3-0-SO-MRU-8D-0	1510053-004
OU3-0-SO-MRL-17H-0	1510055-005	OU3-0-SO-MRU-12B-0	1510054-005	OU3-0-SO-MRU-8D-0.501	1510053-005
OU3-0-SO-MRL-17H-0.501	1510055-006	OU3-0-SO-MRU-12B-0.501	1510054-006	OU3-0-SO-MRU-7D-0	1510053-006
OU3-0-SO-MRL-17G-0	1510055-007	OU3-0-SO-MRU-12B-04	1510054-007	OU3-0-SO-MRU-7D-0.501	1510053-007
OU3-0-SO-MRL-17G-0.501	1510055-008	OU3-0-SO-MRU-13B-0	1510054-008	OU3-9-SO-MRU-7D-0.501	1510053-008
OU3-0-SO-MRL-18G-0	1510055-009	OU3-0-SO-MRU-13B-0.501	1510054-009	OU3-0-SO-MRU-12E-0	1510053-009
OU3-0-SO-MRL-18G-0.501	1510055-010	OU3-0-SO-MRU-10B-0	1510054-010	OU3-0-SO-MRU-12E-0.501	1510053-010
OU3-0-SO-MRL-19G-0	1510055-011	OU3-0-SO-MRU-10B-0.501	1510054-011	OU3-0-SO-MRU-12E-1.5	1510053-011
OU3-0-SO-MRL-19G-0.501	1510055-012	OU3-0-SO-MRU-9B-0	1510054-012	OU3-0-SO-MRU-13C-0	1510053-012
OU3-0-SO-MRL-15K-0	1510055-013	OU3-0-SO-MRU-8B-0	1510054-013	OU3-0-SO-MRU-13C-0.501	1510053-013
OU3-0-SO-MRL-15K-0.501	1510055-014	OU3-0-SO-MRU-8B-0.501	1510054-014	OU3-0-SO-MRU-13C-055.5	1510053-014
OU3-0-SO-MRL-15J-0	1510055-015	OU3-0-SO-MRU-7B-0	1510054-015	OU3-0-SO-MRU-12C-0	1510053-015
OU3-0-SO-MRL-15J-0.501	1510055-016	OU3-0-SO-MRU-7B-0.501	1510054-016	OU3-0-SO-MRU-12C-0.501	1510053-016
OU3-0-SO-MRL-15J-1.9	1510055-017	OU3-0-TL-MRU-7B	1510054-017	OU3-0-SO-MRU-12C-4.3	1510053-017
OU3-0-SO-MRL-15I-0	1510055-018	OU3-0-SO-MRU-7B-4.7	1510054-018	OU3-0-SO-MRU-11C-0	1510053-018
OU3-0-SO-MRL-15I-0.501	1510055-019	OU3-0-SO-MRU-7C-0	1510054-019	OU3-0-SO-MRU-11C-0.501	1510053-019
OU3-0-SO-MRL-15I-1.5	1510055-020	OU3-0-SO-MRU-7C-0.501	1510054-020	OU3-0-SO-MRU-11C-3.7	1510053-020
OU3-0-SO-MRL-15H-0	1510055-021			OU3-0-SO-MRU-10C-0	1510053-021
OU3-0-SO-MRL-15H-0.501	1510055-022			OU3-0-SO-MRU-10C-0.501	1510053-022
OU3-9-SO-MRL-15H-0.501	1510055-023			OU3-0-SO-MRU-10C-03	1510053-023
OU3-0-SO-MRL-15G-0	1510055-024				
OU3-0-SO-MRL-15G-0.501	1510055-025				
OU3-0-SO-MRL-14I-0	1510055-026				
OU3-0-SO-MRL-14I-0.501	1510055-027				
OU3-0-SO-MRL-14I-1.9	1510055-028				
OU3-0-SO-MRL-14J-0	1510055-029				
OU3-0-SO-MRL-14J-0.501	1510055-030				
OU3-0-SO-MRL-14H-0	1510055-031				
OU3-0-SO-MRL-14H-0.501	1510055-032				
OU3-0-SO-MRL-14G-0	1510055-033				
OU3-0-SO-MRL-14G-0.501	1510055-034				
OU3-0-SO-MRL-18F-0	1510055-035				
OU3-0-SO-MRL-18F-2.7	1510055-036				
OU3-0-SO-MRL-15E-0	1510055-037				
OU3-0-SO-MRL-15E-0.501	1510055-038				
OU3-0-SO-MRL-15D-0	1510055-039				
OU3-0-SO-MRL-15D-0.501	1510055-040				

Sample Date: 10/5/2015		Sample Date: 10/6/2015		Sample Date: 10/7/2015	
Field Sample ID	Laboratory Sample ID	Field Sample ID	Laboratory Sample ID	Field Sample ID	Laboratory Sample ID
OU3-0-SO-NR-12Q-0	1510119-001	OU2-0-GW-P2-5	1510120-001	OU2-0-GW-T3E0125	1510154-001
OU3-0-SO-NR-12Q-0.501	1510119-002	OU2-9-GW-P2-5	1510120-002	OU3-0-GW-T1E0125	1510154-002
OU3-0-SO-FT-3B-0	1510119-003	OU3-0-GW-T6E1350	1510120-003	OU3-9-GW-T1E0125	1510154-003
OU3-0-SO-FT-3B-0.501	1510119-004	OU3-0-GW-P2-1(A)	1510120-004	OU3-0-GW-FPT-6-A	1510154-004
OU3-0-SO-FT-3B-1.8	1510119-005	OU3-0-GW-T6W0625	1510120-005	OU3-0-GW-RT-11	1510154-005
		OU2-0-GW-T4E0875	1510120-006	OU3-0-GW-MR-6	1510154-006
		OU2-0-GW-T5E0875	1510155-001	OU3-0-GW-MR-5	1510154-007
		OU2-0-GW-P2-2 (B)	1510155-002	OU3-0-GW-MR-3	1510154-008
		OU2-0-GW-P2-2 (A)	1510155-003		
		OU2-0-GW-P2-4	1510155-004		
		OU2-0-GW-T3W0375	1510155-005		
		OU3-0-GW-T2E0125	1510155-006		

Sample Date: 10/8/2015		Sample Date: 10/9/2015			
Field Sample ID	Laboratory Sample ID	Field Sample ID	Laboratory Sample ID		
OU2-0-SW-SCI80	1510190-001	OU3-0-SW-SC248BC	1510204-001		
OU2-9-SW-SCI80	1510190-002	OU3-9-SW-SC248BC	1510204-002		
OU2-0-SW-SCI	1510190-003	OU3-0-SW-SC248AC	1510204-003		
OU2-0-SW-BIRF	1510190-004	OU1-0-SW-PFOU1	1510204-004		
OU2-0-SW-SCWWT	1510190-005	OU3-0-SW-SCRFT72	1510204-005		
OU2-0-SW-ASCWWT	1510190-006	OU3-0-SW-SCHFTR	1510204-006		
OU3-0-SW-NPCWR	1510190-007				
OU3-0-SW-SPCWR	1510190-008				
OU2-0-SW-SCBNPRR	1510190-009				
OU3-0-SW-SC248NRB	1510190-010				
OU3-0-SW-SC1C	1510190-011				

Sample type is denoted by a sample type code: 0=normal samples; 9= field duplicate

Sample media is denoted by a two character sample media code: VG=vegetation; SD=sediment; SO=soil; TL=tailings; BM=benthic macro invertebrate; FI=fish; SW=surface water; GW=groundwater

APPENDIX 3 – LABORATORY DATA QUALIFIERS

Various qualifiers may be attached to certain analytical results data by either the laboratories conducting the analyses or by persons performing independent data validation. These qualifiers are used to provide additional information about the sample result and generally provide a modifier related to chemical identity and/or chemical concentration. Data qualifiers that accompany a quantitative result may reflect analytical deficiencies associated with more than one review criterion found in USEPA data validation guidance. Data qualifiers used for QA review and data validation is defined in the following table. These Qualifiers are used in Appendices 4 and 5.

Table A3-1: Laboratory Provided Data Qualifier Definitions

Qualifier	Definition
@	High RPD due to suspected sample non-homogeneity or matrix interference.
#	High RPD due to low analyte concentration. In this range, high RPDs are expected.
*	The reporting limits were raised due to sample matrix interferences.
§	QC limits are set with an accuracy of two significant figures, therefore the recovery rounds to an acceptable value within the control limits.
^	Reissue of a previously generated report. Information has been added, updated, or revised. Information herein supersedes that of the previously issued reports.
1	Matrix spike recovery indicates matrix interference. The method is in control as indicated by the LCS.
2	Analyte concentration is too high for accurate matrix spike recovery and/or RPD.
3	Matrix spike recoveries and/ or high RPDs indicate suspected sample non-homogeneity. The method is in control as indicated by the LCS.
B	The method blank was acceptable, as the method blank result is less than 10% of the lowest reported sample concentration.

Table A3-2: Additional Data Qualifier Definitions based on QA/QC Review

Qualifier	Definition
J	Estimated value
a	High RPD, results greater than 5 time PQL
b	High RPD, results less than 5 times PQL

APPENDIX 4 – LABORATORY DATA FROM MATRIX SPIKE DUPLICATE ASSESSMENTS

Laboratory Sample ID	MS / MSD Control Limit Deficient - Analyte (Deficiency)	Qualifier
1507501-001AMS / 1507501-001AMSD	Potassium (High MS %R)	3
1507501-010AMS / 1507501-010AMSD	Phosphate (High MS %R)	3
1507501-016AMS / 1507501-016AMSD	Phosphate (Low MS / MSD %R)	3
1507540-001AMS / 1507540-001AMSD	Aluminum (High MS %R / Low MSD %R)	2
	Antimony (Low MS %R / High MSD %R)	
	Arsenic (High MS / MSD %R)	
	Calcium (Low MS / MSD %R)	
	Copper (Low MS / High MSD %R)	
	Iron (Low MS %R / High MSD %R)	
	Lead (Low MS / MSD %R)	
	Magnesium (Low MS / MSD %R)	
	Manganese (Low MS %R / High MSD %R)	
	Mercury (Low MS / MSD %R)	
	Potassium (Low MSD %R)	
	Zinc (Low MS / MSD %R)	
	Barium (High MS / MSD %R)	
	Cadmium (Low MS/ MSD %R)	3
1507540-001BMS / 1507540-001BMSD	Chromium (Low MS / MSD % R)	
	Silver (Low MS / MSD %R)	
	Phosphate (Low MS / MSD %R)	2
	Phosphate (High MS %R / Low MSD %R)	3
1507540-021AMS / 1507540-021AMSD	Aluminum (Low MS %R / High MSD %R)	2
	Antimony (Low MS %R)	
	Arsenic (High MS %R / Low MSD %R)	
	Barium (Low MS / MSD %R)	
	Calcium (High MSD %R)	
	Copper (Low MS / MSD %R)	
	Iron (High MS / MSD %R)	
	Lead (Low MS / MSD %R)	
	Magnesium (Low MS / MSD %R)	
	Manganese (High MS %R / Low MSD %R)	
	Vanadium (Low MS / MSD %R)	
	Zinc (Low MS / MSD %R)	
	Mercury (High MSD %R)	1
	Cadmium (Low MSD %R)	3
1507540-024BMS / 1507540-024BMSD	Phosphate (High MS / MSD %R)	3
1507540-032BMS / 1507540-032BMSD	Phosphate (Low MS %R / High MSD %R)	2
1507540-037BMS / 1507540-037BMSD	Phosphate (High MS / MSD %R)	2

Laboratory Sample ID	MS / MSD Control Limit Deficient - Analyte (Deficiency)	Qualifier
1508019-001AMS / 1508019-001AMSD	Aluminum (High MS / MSD %R)	2
	Calcium (High MS / MSD %R)	
	Iron (High MS / MSD %R)	
	Magnesium (High MS / MSD %R)	
	Potassium (High MS / MSD %R)	
	Zinc (Low MS / MSD %R)	
	Arsenic (Low MS %R / High MSD %R)	
	Barium (Low MS / MSD %R)	
	Copper (Low MS / MSD %R)	
	Lead (Low MS / MSD %R)	
	Manganese (Low MS / MSD %R)	
	Mercury (Low MS / MSD %R)	
	Antimony (Low MS / MSD %R)	
	Cadmium (Low MSD %R)	
	Chromium (High MSD %R)	
1508019-011AMS / 1508019-011AMSD	Thallium (Low MSD %R)	3
	Silver (High MS %R)	
	Aluminum (Low MS / MSD %R)	
	Antimony (Low MS / MSD %R)	
	Arsenic (Low MS %R / High MSD %R)	
	Barium (High MSD %R)	
	Cadmium (Low MS %R)	
	Calcium (Low MS / MSD %R)	
	Copper (Low MS / MSD %R)	
	Iron (Low MS %R / High MSD %R)	
	Magnesium (Low MS / MSD %R)	
	Manganese (Low MS %R / High MSD %R)	
	Zinc (High MS / MSD %R)	
	Lead (High MS %R / Low MSD %R)	3
1508019-012BMS / 1508019-012BMSD	Silver (Low MSD %R)	
	Sodium (High MS / MSD %R)	
	Thallium (High MS / MSD %R)	
	Phosphate (High MS / MSD %R)	2
1508019-013BMS / 1508019-013BMSD	Phosphate (Low MS / MSD %R)	2
	Mercury (Low MS %R / High MSD %R)	2
1508019-021AMS / 1508019-021AMSD	Phosphate (High MS %R / Low MSD %R)	2
	Phosphate (Low MSD %R)	3
1508082-001AMS / 1508082-001AMSD	Aluminum (High MS / MSD %R)	2
	Calcium (Low MS %R / High MSD %R)	
	Iron (Low MS %R / High MSD %R)	
	Magnesium (High MSD %R)	
	Manganese (High MS %R / Low MSD %R)	
	Zinc (High MS %R / Low MSD %R)	3
	Antimony (Low MS %R)	
	Barium (High MS %R / Low MSD %R)	
	Chromium (Low MSD %R)	
	Vanadium (Low MSD %R)	

Laboratory Sample ID	MS / MSD Control Limit Deficient - Analyte (Deficiency)	Qualifier
1508082-013AMS / 1508082-013AMSD	Aluminum (High MS / MSD %R)	2
	Iron (High MS / MSD %R)	
	Potassium (High MS / MSD %R)	
	Manganese (Low MS / MSD %R)	
	Zinc (Low MS / MSD %R)	
	Calcium (High MSD %R)	
	Barium (Low MS %R / High MSD %R)	
1508082-019BMS / 1508082-019BMSD	Phosphate (Low MS / MSD %R)	3
1508082-020BMS / 1508082-020BMSD	Phosphate (High MS / MSD %R)	2
1508082-021BMS / 1508082-021BMSD	Phosphate (Low MS / MSD %R)	3
1508082-032AMS / 1508082-032AMSD	Aluminum (Low MS / MSD %R)	2
	Antimony (Low MS / MSD %R)	
	Arsenic (High MS / MSD %R)	
	Barium (Low MS %R)	
	Calcium (High MS %R)	
	Copper (Low MS %R / High MSD %R)	
	Iron (High MS / MSD %R)	
	Lead (High MS %R / Low MSD %R)	
	Magnesium (High MS %R)	
	Manganese (Low MS / MSD %R)	
	Zinc (Low MS / MSD %R)	
	Cadmium (Low MSD %R)	
	Potassium (Low MS %R)	
1508082-039BMS / 1508082-039BMSD	Phosphate (High MS %R / Low MSD %R)	3
1508082-052AMS / 1508082-052AMSD	Aluminum (High MS / MSD %R)	2
	Barium (High MS %R / Low MSD %R)	
	Calcium (High MS / MSD %R)	
	Iron (High MS / MSD %R)	
	Magnesium (High MS %R)	
	Manganese (High MS %R)	
	Silver (Low MSD %R)	
1508082-056AMS / 1508082-056AMSD	Mercury (Low MS / MSD %R)	2
1508082-058BMS / 1508082-058BMSD	Phosphate (Low MS / MSD %R)	2
1508082-059BMS / 1508082-059BMSD	Phosphate (High MSD %R)	2
1508110-001BMS / 1508110-001BMSD	Phosphate (Low MSD %R)	2
1508110-003AMS / 1508110-003AMSD	Aluminum (High MS / Low MSD %R)	2
	Iron (Low MS / MSD %R)	
	Magnesium (Low MSD %R)	
	Manganese (Low MS / MSD %R)	
	Potassium (Low MSD %R)	
	Antimony (Low MS %R)	
	Barium (Low MS / MSD %R)	
	Calcium (Low MS %R)	3
	Lead (Low MS / MSD %R)	
	Selenium (High MSD %R)	
1508110-018BMS / 1508110-018 BMSD	Phosphate (High MS / MSD %R)	2

Laboratory Sample ID	MS / MSD Control Limit Deficient - Analyte (Deficiency)	Qualifier
1508273-001AMS / 1508273-001AMSD	Calcium (High MSD %R)	2
	Iron (Low MS / MSD %R)	3
1508273-007AMS / 1508273-007AMSD	Phosphate (Low MS / MSD %R)	2
1508273-009AMS / 1508273-009AMSD	Phosphate (High MS / MSD %R)	2
1508366-001AMS / 1508366-001AMSD	Mercury (Low MS %R)	1
	Aluminum (Low MS / MSD %R)	3
	Calcium (High MS %R / Low MSD %R)	
1508366-009AMS / 1508366-009AMSD	Phosphate (High MS / MSD %R)	2
1508394-001AMS / 1508394-001AMSD	Potassium (Low MS %R)	2
	Calcium (High MS / MSD %R)	3
	Iron (High MS %R)	
	Lead (High MS / MSD %R)	
1508394-003AMS / 1508394-003AMSD	Phosphate (Low MS / MSD %R)	3
1508441-001AMS / 1508441-001AMSD	Mercury (High MS %R)	1
	Aluminum (High MS / MSD %R)	2
	Calcium (High MS / MSD %R)	
	Iron (High MS / MSD %R)	
	Lead (High MS / MSD %R)	
	Manganese (High MS / MSD %R)	
1508512-001AMS / 1508512-001AMSD	Phosphate (Low MS %R / High MSD %R)	3
1508512-001CMS NO3 / 1508512-001 CMSD NO3	Manganese (High MSD %R)	2
1508530-001AMS / 1508530-001AMSD	Nitrate (Low MS / MSD %R)	1
	Iron (Low MS %R)	1
	Calcium (Low MS / MSD %R)	2
	Manganese (Low MS / MSD %R)	
1508530-001BMS / 1508530-001BMSD	Calcium (High MS %R / Low MSD %R)	2
	Iron (High MS %R)	
	Magnesium (High MS %R)	
	Sodium (High MS %R)	
1508530-001CMS NO3 / 1508530-001CMSD NO3	Nitrate (Low MS / MSD %R)	1
1508543-001AMS / 1508543-001AMSD	Calcium (Low MS / MSD %R)	2
	Sodium (Low MSD %R)	
	Zinc (Low MS / MSD %R)	
1508543-001BMS / 1508543-001BMSD	Calcium (Low MS %R / High MSD %R)	2
	Manganese (Low MS / MSD %R)	
	Zinc (Low MS / MSD %R)	
1509157-001AMS / 1509157-001AMSD	Phosphate (Low MS %R / High MSD %R)	2
	Calcium (Low MS / MSD %R)	3
	Iron (Low MS / MSD %R)	
	Magnesium (Low MS %R)	
	Manganese (Low MS / MSD %R)	
	Potassium (Low MS / MSD %R)	
	Sodium (Low MS / MSD %R)	

Laboratory Sample ID	MS / MSD Control Limit Deficient - Analyte (Deficiency)	Qualifier
1509209-001AMS / 1509209-001AMSD	Calcium (Low MS / MSD %R)	2
	Arsenic (Low MS / MSD %R)	3
	Copper (Low MSD %R)	
	Barium (High MS / MSD %R)	
	Lead (Low MS / MSD %R)	
	Manganese (Low MS / MSD %R)	
	Zinc (Low MS / MSD %R)	
1509209-002AMS / 1509209-002AMSD	Iron (Low MS / MSD %R)	3
1509209-003AMS / 1509209-003AMSD	Phosphate (Low MS / MSD %R)	3
1509256-001AMS / 1509256-001AMSD	Sodium (Low MSD %R)	2
1509256-001BMS / 1509256-001BMSD	Sodium (High MSD %R)	2
1509283-001AMS / 1509283-001AMSD	Sodium (High MSD %R)	2
1509314-001BMS / 1509314-001BMSD	Calcium (High MSD %R)	2
1509314-004CMS / 1509314-004CMSD	Phosphate (Low MS %R)	1
1509397-001AMS / 1509397-001AMSD	Mercury (Low MS %R)	1
	Aluminum (Low MS %R / High MSD %R)	2
	Iron (High MS %R / Low MSD %R)	
	Magnesium (Low MS %R)	
	Potassium (Low MS %R)	
	Barium (Low MS / MSD %R)	
	Lead (Low MS / MSD %R)	
	Manganese (Low MS / MSD %R)	
	Zinc (Low MS / MSD %R)	
	Antimony (Low MS / MSD %R)	3
	Arsenic (Low MS / MSD %R)	
	Copper (Low MS / MSD %R)	
	Chromium (Low MSD %R)	
	Cobalt (Low MSD %R)	
	Nickel (Low MSD %R)	
1509397-001BMS / 1509397-001BMSD	Phosphate (High MS / MSD %R)	1
1509397-021AMS / 1509397-021AMSD	Aluminum (High MS / MSD %R)	2
	Iron (High MS / MSD %R)	
	Magnesium (High MSD %R)	
	Manganese (Low MS / MSD %R)	
	Potassium (High MS %R)	
	Barium (High MS %R)	2 (MS) @ (MSD)
	Vanadium (Low MSD %R)	3
1509397-022BMS / 1509397-022BMSD	Phosphate (Low MSD %R)	1
1509478-001BMS / 1509478-001BMSD	Phosphate (Low MS / MSD %R)	2
1509478-010AMS / 1509478-010AMSD	Aluminum (High MS / MSD %R)	2
	Barium (Low MS / MSD %R)	
	Iron (High MS / MSD %R)	
	Magnesium (High MS / MSD %R)	
	Manganese (Low MS / MSD %R)	
	Potassium (High MS / MSD %R)	
	Vanadium (Low MS %R)	
	Cobalt (Low MS / MSD %R)	3
	Lead (Low MS %R)	
	Nickel (Low MS %R)	

Laboratory Sample ID	MS / MSD Control Limit Deficient - Analyte (Deficiency)	Qualifier
1509513-001AMS / 1509513-001AMSD	Iron (High MS / MSD %R)	2
	Barium (Low MS / High MSD %R)	
	Lead (High MS / MSD %R)	
	Manganese (Low MS %R / High MSD %R)	
	Aluminum (High MS / MSD %R)	
	Calcium (High MSD %R)	
	Magnesium (High MSD %R)	
	Potassium (High MSD %R)	
	Phosphate (High MS / MSD %R)	
1509513-001BMS / 1509513-001BMSD	Phosphate (Low MS %R)	2
1509513-002BMS / 1509513-002BMSD	Phosphate (Low MS / MSD %R)	2
1509513-016BMS / 1509513-016BMSD	Phosphate (Low MS / MSD %R)	2
1509513-020AMS / 1509513-020AMSD	Aluminum (High MS / MSD %R)	2
	Barium (High MS %R / Low MSD %R)	
	Calcium (High MS %R)	
	Copper (High MS %R / Low MSD %R)	
	Iron (Low MS / MSD %R)	
	lead (Low MS / MSD %R)	
	Manganese (Low MS / MSD %R)	
	Potassium (High MS / MSD %R)	
	Zinc (Low MSD %R)	
	Antimony (Low MSD %R)	3
	Arsenic (Low MSD %R)	
	Cobalt (Low MSD %R)	
1509533-001AMS / 1509533-001AMSD	Aluminum (High MS %R / Low MSD %R)	2
	Calcium (High MS / MSD %R)	
	Iron (High MS / MSD %R)	
	Magnesium (Low MS / MSD %R)	
	Potassium (Low MS / Low MSD %R)	
	Barium (High MS / MSD %R)	
	Manganese (High MS / MSD %R)	
	Chromium (High MSD %R)	3
1509533-010BMS / 1509533-010BMSD	Phosphate (High MS / MSD %R)	2
1509533-019BMS / 1509533-019BMSD	Phosphate (Low MS / MSD %R)	2
1509533-021AMS / 1509533-021AMSD	Mercury (Low MS / MSD %R)	2
1509554-001AMS / 1509554-001AMSD	Aluminum (Low MS %R / High MSD %R)	2
	Antimony (Low MS / MSD %R)	
	Arsenic (Low MS / MSD %R)	
	Barium (High MS / MSD %R)	
	Calcium (Low MS %R / High MSD %R)	
	Copper (Low MS / MSD %R)	
	Iron (High MS / MSD %R)	
	Lead (Low MS %R / High MSD %R)	
	Magnesium (High MSD %R)	
	Manganese (Low MS / MSD %R)	
	Mercury (High MS / MSD %R)	
	Zinc (Low MS %R / High MSD %R)	
	Cadmium (Low MS %R)	3 , 3 (MSD)
	Chromium (High MSD %R)	3
	Silver (Low MS %R)	

Laboratory Sample ID	MS / MSD Control Limit Deficient - Analyte (Deficiency)	Qualifier
1509554-003BMS / 1509554-003BMSD	Phosphate (Low MSD %R)	2
1509554-016BMS / 1509554-016BMSD	Phosphate (Low MS / MSD %R)	2
1509554-021AMS / 1509554-021AMSD	Aluminum (High MS / MSD %R)	2
	Calcium (High MS / MSD %R)	
	Copper (High MS %R / Low MSD %R)	
	Iron (High MS / MSD %R)	
	Lead (Low MS %R / High MSD %R)	
	Magnesium (Low MS %R / High MSD %R)	
	Manganese (High MS / MSD %R)	
	Mercury (Low MS / MSD %R)	
	Zinc (Low MS %R / High MSD %R)	
	Barium (Low MS / MSD %R)	
1509554-021BMS / 1509554-021BMSD	Cadmium (High MS %R)	3
	Chromium (High MS %R)	
	Silver (High MSD %R)	
	Phosphate (Low MS / MSD %R)	2
1509599-001AMS / 1509599-001AMSD	Mercury (High MS %R / Low MSD %R)	1 (MS) 1@ (MSD)
	Aluminum (High MS %R / Low MSD %R)	2
	Antimony (High MS %R / Low MSD %R)	
	Arsenic (High MS %R / Low MSD %R)	
	Barium (High MS %R / Low MSD %R)	
	Calcium (High MS %R / Low MSD %R)	
	Copper (High MS %R / Low MSD %R)	
	Iron (High MS %R / Low MSD %R)	
	Lead (High MS %R / Low MSD %R)	
	Magnesium (High MS %R / Low MSD %R)	
1509599-004BMS / 1509599-004BMSD	Manganese (High MS %R / Low MSD %R)	3
	Zinc (High MS %R / Low MSD %R)	
	Cadmium (Low MSD %R)	
	Chromium (Low MSD %R)	
	Potassium (Low MS %R / High MSD %R)	
	Silver (Low MSD %R)	
	Sodium (High MSD %R)	
1509599-009AMS / 1509599-009AMSD	Vanadium (Low MSD %R)	2
	Selenium (High MS %R)	
	Phosphate (Low MS / MSD %R)	2
	Aluminum (Low MS %R / High MSD %R)	
	Iron (Low MS %R)	
	Magnesium (Low MS %R)	
	Potassium (Low MS %R)	
	Barium (High MS / MSD %R)	
	Manganese (High MS %R / Low MSD %R)	
1509599-021BMS / 1509599-021BMSD	Phosphate (High MS / MSD %R)	2
1509599-026BMS / 1509599-026BMSD	Phosphate (Low MSD %R)	2
1509599-027BMS / 1509599-027BMSD	Phosphate (Low MS %R / High MSD %R)	2

Laboratory Sample ID	MS / MSD Control Limit Deficient - Analyte (Deficiency)	Qualifier
1509599-029AMS / 1509599-029AMSD	Aluminum (High MS / MSD %R)	2
	Antimony (Low MS / MSD %R)	
	Arsenic (Low MS / MSD %R)	
	Calcium (High MS %R / Low MSD %R)	
	Copper (Low MS / MSD %R)	
	Iron (High MS %R / Low MSD %R)	
	Lead (High MS %R / Low MSD %R)	
	Magnesium (Low MSD %R)	
	Manganese (Low MS / MSD %R)	
	Zinc (High MS %R / Low MSD %R)	
	Barium (Low MS %R / High MSD %R)	
	Cadmium (Low MS / MSD %R)	
	Silver (Low MS / MSD %R)	
	Phosphate (High MS %R)	2
1509604-001AMS / 1509604-001AMSD	Aluminum (Low MS %R / High MSD %R)	2
	Antimony (Low MS %R / High MS %R)	
	Arsenic (High MS / MSD %R)	
	Barium (Low MS / MSD %R)	
	Calcium (High MS / MSD %R)	
	Cobalt (Low MS / MSD %R)	
	Copper (Low MS %R / High MSD %R)	
	Iron (Low MS %R / High MSD %R)	
	Lead (Low MS %R / High MSD %R)	
	Magnesium (High MS / MSD %R)	
	Manganese (Low MS / MSD %R)	
	Mercury (High MS / MSD %R)	
	Nickel (Low MS / MSD %R)	
	Zinc (Low MS %R / High MSD %R)	
	Chromium (Low MS %R)	2 (MS) @ (MSD)
	Cadmium (High MS %R)	
	Potassium (Low MS %R / High MSD %R)	
	Silver (Low MS %R / High MSD %R)	
1509604-001BMS / 1509604-001BMSD	Sodium (Low MS / MSD %R)	3
	Thallium (Low MS / MSD %R)	
	Vanadium (High MSD %R)	
	Phosphate (High MS / MSD %R)	2
	Phosphate (High MS / MSD %R)	2
	Aluminum (Low MSD %R)	
	Calcium (Low MS %R)	
1509604-010AMS / 1509604AMSD	Barium (Low MS / MSD %R)	2
	Iron (Low MS / MSD %R)	
	Magnesium (Low MSD %R)	
	Manganese (Low MS / MSD %R)	
	Sodium (High MS / MSD %R)	3
	Phosphate (Low MS / MSD %R)	2

Laboratory Sample ID	MS / MSD Control Limit Deficient - Analyte (Deficiency)	Qualifier
1509605-001AMS / 1509605-001AMSD	Aluminum (High MS / MSD %R)	2
	Calcium (High MS / MSD %R)	
	Iron (High MS / MSD %R)	
	Magnesium (High MS / MSD %R)	
	Antimony (Low MS %R / High MSD %R)	
	Arsenic (Low MS / MSD %R)	
	Copper (Low MS %R / High MSD %R)	
	Lead (Low MS %R / High MSD %R)	
	Manganese (Low MS %R / High MSD %R)	
	Zinc (High MS / MSD %R)	
	Mercury (High MS / MSD %R)	
	Barium (Low MS %R)	
	Chromium (Low MS / MSD %R)	
	Potassium (High MSD %R)	
1509605-001BMS / 1509605-001BMSD	Phosphate (High MS %R)	2
1509605-004BMS / 1509605-004BMSD	Phosphate (High MS / MSD %R)	1
1509605-007BMS / 1509605-007BMSD	Phosphate (High MS / MSD %R)	2
1509606-001AMS / 1509606-001AMSD	Aluminum (High MS / MSD %R)	2
	Barium (High MS %R)	
	Calcium (Low MSD %R)	
	Iron (High MS / MSD %R)	
	Lead (High MS %R / Low MSD %R)	
	Manganese (High MS %R / Low MSD %R)	
	Mercury (High MS %R / Low MSD %R)	
	Potassium (High MS %R)	
	Zinc (High MS %R / Low MSD %R)	
1509606-001BMS / 1509606-001BMSD	Phosphate (High MS / MSD %R)	2
1509606-009AMS / 1509606-009AMSD	Aluminum (High MS / MSD %R)	2
	Barium (Low MS / MSD %R)	
	Calcium (High MS %R / Low MSD %R)	
	Iron (High MS / MSD %R)	
	Magnesium (High MS %R)	
	Potassium (High MS %R)	
	Manganese (Low MS %R)	2 (MS) @ (MSD)
	Cobalt (Low MS %R)	3
	Lead (Low MS / MSD %R)	
	Zinc (Low MSD %R)	
1509606-012BMS / 1509606-012BMSD	Phosphate (High MS / MSD %R)	2
1509606-021AMS / 1509606-021AMSD	Mercury (High MS %R)	3
1509606-022BMS / 1509606-022BMSD	Phosphate (High MS %R / Low MSD %R)	2
1509606-025BMS / 1509606-025BMSD	Phosphate (High MS / MSD %R)	2

Laboratory Sample ID	MS / MSD Control Limit Deficient - Analyte (Deficiency)	Qualifier
1510030-001AMS / 1510030-001AMSD	Mercury (High MS %R)	1
	Aluminum (Low MS %R / High MSD %R)	2
	Barium (Low MS / MSD %R)	
	Calcium (Low MS %R)	
	Iron (High MS %R / Low MSD %R)	
	Lead (Low MS %R)	
	Manganese (Low MS / MSD %R)	
	Zinc (Low MS %R)	
	Antimony (Low MSD %R)	
	Copper (Low MSD %R)	
1510030-001BMS / 1510030-001BMSD	Magnesium (High MSD %R)	3
	Phosphate (Low MS %R)	2
	Aluminum (High MS / MSD %R)	2
	Barium (High MS / MSD %R)	
	Calcium (High MS / MSD %R)	
	Copper (High MS / MSD %R)	
	Iron (High MS / MSD %R)	
	Lead (High MS %R / Low MSD %R)	
	Magnesium (High MS / MSD %R)	
	Manganese (Low MS %R / High MSD %R)	
1510031-001AMS / 1510031AMSD	Potassium (High MS / MSD %R)	3
	Zinc (High MS / MSD %R)	
	Arsenic (Low MS / MSD %R)	
	Beryllium (Low MS / MSD %R)	
	Mercury (High MSD %R)	
	Vanadium (High MSD %R)	
	Phosphate (Low MS / MSD %R)	2
	1510031-011BMS / 1510031-011BMSD	2
	1510031-017BMS / 1510031-017BMSD	2
	1510031-021AMS / 1510031-021AMSD	2
1510032-001AMS / 1510032-001AMSD	Mercury (High MS / MSD %R)	2
	Aluminum (Low MS %R / High MSD %R)	
	Barium (High MSD %R)	
	Iron (High MS / MSD %R)	
	Lead (Low MS %R)	
	Manganese (High MS / MSD %R)	
	Mercury (Low MS / MSD %R)	
1510032-001BMS / 1510032-001BMSD	Zinc (Low MS / MSD %R)	
1510032-013BMS / 1510032-013BMSD	Phosphate (High MS / MSD %R)	2
1510032-014BMS / 1510032-014BMSD	Phosphate (Low MS / MSD %R)	2
1510032-021BMS / 1510032-021BMSD	Phosphate (Low MS / MSD %R)	2
	Phosphate (High MS / MSD %R)	2

Laboratory Sample ID	MS / MSD Control Limit Deficient - Analyte (Deficiency)	Qualifier
1510053-001AMS / 1510053-001AMSD	Aluminum (High MS / MSD %R)	2
	Barium (High MS / MSD %R)	
	Calcium (High MS %R / Low MSD %R)	
	Iron (High MS %R / Low MSD %R)	
	Lead (Low MS %R / High MSD %R)	
	Magnesium (High MS / MSD %R)	
	Manganese (High MS / MSD %R)	
	Potassium (High MS %R)	
	Zinc (High MSD %R)	
	Arsenic (High MS %R / Low MSD %R)	
	Chromium (Low MSD %R)	3
	Copper (Low MS %R)	
1510053-001BMS / 1510053-001BMSD	Phosphate (High MS %R / Low MSD %R)	2
1510053-009AMS / 1510053-009AMSD	Mercury (Low MS / MSD %R)	3
1510053-010AMS / 1510053-010AMSD	Mercury (High MSD %R)	3
1510053-021BMS / 1510053-021BMSD	Phosphate (High MS / MSD %R)	2
1510054-001AMS / 1510054-001AMSD	Aluminum (High MS / MSD %R)	2
	Barium (High MS %R / Low MSD %R)	
	Iron (Low MS / MSD %R)	
	Lead (Low MS / MSD %R)	
	Magnesium (High MSD %R)	
	Manganese (High MS %R / Low MSD %R)	
	Potassium (High MSD %R)	
	Arsenic (Low MSD %R)	
	Chromium (Low MS / MSD %R)	
	Cobalt (Low MS / MSD %R)	
	Copper (Low MS / MSD %R)	3
	Nickel (Low MS / MSD %R)	
1510054-001BMS / 1510054-001BMSD	Vanadium (Low MSD %R)	
	Zinc (Low MS / MSD %R)	
	Phosphate (High MS / MSD %R)	2
	Phosphate (Low MS %R / High MSD %R)	2
1510055-001AMS / 1510055-001AMSD	Aluminum (Low MS / MSD %R)	2
	Barium (Low MS %R / High MSD %R)	
	Calcium (Low MS / MSD %R)	
	Copper (Low MS / MSD %R)	
	Iron (Low MS / MSD %R)	
	Lead (High MS %R / Low MSD %R)	
	Magnesium (Low MS / MSD %R)	
	Manganese (Low MS %R / High MSD %R)	
	Mercury (High MS / MSD %R)	
	Potassium (Low MS / MSD %R)	
	Zinc (Low MSD %R)	
	Antimony (Low MS / MSD %R)	3
	Arsenic (Low MS %R)	
	Chromium (Low MSD %R)	
	Vanadium (Low MS %R)	

Laboratory Sample ID	MS / MSD Control Limit Deficient - Analyte (Deficiency)	Qualifier
1510055-001BMS / 1510055-001BMSD	Phosphate (High MS %R / Low MSD %R)	2
1510055-009BMS / 1510055-009BMSD	Phosphate (Low MS / MSD %R)	2
1510055-010AMS / 1510055-010AMSD	Aluminum (Low MS / MSD %R)	2
	Barium (Low MS %R / High MSD %R)	
	Calcium (High MS / MSD %R)	
	Iron (Low MS / MSD %R)	
	Magnesium (High MS %R / Low MSD %R)	
	Manganese (Low MS / MSD %R)	
	Potassium (Low MS / MSD %R)	
	Chromium (High MS / MSD %R)	
	Vanadium (Low MS %R)	
	Zinc (Low MS / MSD %R)	
1510055-024BMS / 1510055-024BMSD	Copper (Low MS %R)	3 (MS) @ (MSD)
1510055-024BMS / 1510055-024BMSD	Phosphate (High MS %R / Low MSD %R)	2
1510055-028AMS / 1510055-028AMSD	Aluminum (High MS / MSD %R)	2
	Iron (Low MSD %R)	
	Magnesium (High MSD %R)	
	Manganese (High MS / MSD %R)	
	Potassium (Low MSD %R)	
	Zinc (Low MSD %R)	
	Antimony (Low MSD %R)	3
	Arsenic (Low MSD %R)	
	Barium (Low MSD %R)	
	Chromium (Low MSD %R)	
	Lead (Low MS / MSD %R)	
	Vanadium (Low MS / MSD %R)	
1510055-031BMS / 1510055-031BMSD	Phosphate (Low MSD %R)	2
1510119-001AMS / 1510119-001AMSD	Aluminum (High MS / MSD %R)	2
	Iron (High MS / MSD %R)	
	Manganese (High MS / MSD %R)	
	Calcium (Low MS %R)	3
	Mercury (High MS %R)	3 (MS) @ (MSD)
1510119-003AMS / 1510119-003AMSD	Phosphate (High MS / MSD %R)	2
1510120-001AMS / 1510120-001AMSD	Iron (Low MSD %R)	2
	Manganese (Low MS / MSD %R)	
1510120-001BMS / 1510120-001BMSD	Iron (Low MSD %R)	2
1510120-001EMS / 1510120-001EMSD	Nitrate (Low MS / MSD %R)	1
1510154-001AMS / 1510154-001AMSD	Calcium (High MS %R)	2
1510154-001BMS / 1510154-001BMSD	Calcium (High MS %R / Low MSD %R)	2
1510154-001EMS / 1510154-001EMSD	Nitrate (Low MS / MSD %R)	1
1510155-001BMS / 1510155-001BMSD	Calcium (High MSD %R)	2
1510190-001AMS / 1510190-001AMSD	Calcium (High MS %R)	2
1510190-001BMS / 1510190-001BMSD	Sodium (Low MS / MSD %R)	2
1510204-001AMS / 1510204-001AMSD	Calcium (High MSD %R)	2
	Sodium (High MSD %R)	
1510204-001BMS / 1510204-001BMSD	Calcium (Low MS %R)	2
1510204-001CMS / 1510204-001CMSD	Nitrate (Low MS %R)	1

APPENDIX 5 – LABORATORY DATA FROM DUPLICATE ASSESSMENTS

Table A5-1: Field Duplicate Sample Results and RPDs for OU2-0-VG-SCI

Analyte	Sample Identification				RPD (%) [*]	Qualifier		
	OU2-0-VG-SCI		OU2-9-VG-SCI					
	1507501-001		1507501-002					
	PQL	Result	PQL	Result				
Aluminum	54.6	68.4	67.3	U	---			
Antimony	4.37	U	5.38	U	---			
Arsenic	10.9	U	3.36	U	---			
Barium	4.91	11.9	6.05	13.5	13%	b		
Beryllium	2.18	U	2.69	U	---			
Cadmium	0.928	U	1.14	U	---			
Calcium	546	4340	673	3950	9%	a		
Chromium	10.9	U	13.5	U	---			
Cobalt	1.47	U	1.82	U	---			
Copper	16.9	U	20.9	U	---			
Iron	27.3	97.4	33.6	67.9	36%	b		
Lead	7.1	U	8.75	U	---			
Magnesium	546	876	673	940	7%	b		
Manganese	4.37	34.4	5.38	45	27%	a		
Mercury	0.0824	U	0.087	U	---			
Nickel	21.8	U	26.9	U	---			
Phosphate, Total (as P)	107	581	115	486	18%	b		
Potassium	546	12800	673	13800	8%	a		
Selenium	9.28	U	11.4	U	---			
Silver	1.64	U	2.02	U	---			
Sodium	546	U	673	1280	---			
Thallium	4.37	U	5.38	U	---			
Vanadium	2.73	U	3.36	U	---			
Zinc	54.6	162	67.3	121	29%	b		

a: Sample concentration is greater than five times the PQL

b: Sample concentration is less than five times the PQL

U: Compound was not detected

mg/kg: milligrams per kilogram [All values in mg/kg]

PQL: Practical Quantitation Limit

*: RPD= | S-D | x 100 / (S+D) / 2 where S: Original Sample; D: Duplicate Sample

RPD: Relative percent difference

Table A5-2: Field Duplicate Sample Results and RPDs for OU2-0-SD-SCI

Analyte	Sample Identification				RPD (%) [*]	Qualifier		
	OU2-0-SD-SCI		OU2-9-SD-SCI					
	1507540-001		1507501-002					
	PQL	Result	PQL	Result				
Aluminum	15.4	8320	14.3	5920	34%	a		
Antimony	6.17	268	5.7	230	15%	a		
Arsenic	3.85	192	3.56	196	2%	a		
Barium	6.94	53.2	6.42	66.9	23%	a		
Beryllium	3.08	U	2.85	U	---			
Cadmium	1.31	137	1.21	53.8	87%	J		
Calcium	1540	60200	1430	39900	41%	J		
Chromium	15.4	48	14.3	30.1	46%	b		
Cobalt	2.08	6.41	1.92	3.12	69%	b		
Copper	23.9	426	22.1	291	38%	J		
Iron	77.1	21600	71.3	12900	50%	J		
Lead	1000	8340	92.7	3500	82%	J		
Magnesium	1540	15400	1430	8940	53%	J		
Manganese	61.7	2210	57	2060	7%	a		
Mercury	0.056	3.25	0.057	3.56	9%	a		
Nickel	30.8	U	28.5	U	---			
Phosphate, Total (as P)	80.7	1990	69.8	1340	39%	J		
Potassium	154	3310	143	1980	50%	J		
Selenium	13.1	U	12.1	U	---			
Silver	2.31	47.3	2.14	20.1	81%	J		
Sodium	154	558	143	U	---			
Thallium	6.17	U	5.7	10.9	---			
Vanadium	0.771	12.3	0.713	10.7	14%	a		
Zinc	7710	31300	7130	10700	98%	b, J		

a: Sample concentration is greater than five times the PQL

b: Sample concentration is less than five times the PQL

J: RPD is greater than the control limit

U: Compound was not detected

mg/kg: milligrams per kilogram [All values in mg/kg]

PQL: Practical Quantitation Limit

*: RPD= | S-D | x 100 / (S+D) / 2 where S: Original Sample; D: Duplicate Sample

RPD: Relative percent difference

Table A5-3: Field Duplicate Sample Results and RPDs for OU2-0-VG-SCWWWT

Analyte	Sample Identification				RPD (%) [*]	Qualifier		
	OU2-0-VG-SCWWWT		OU2-9-VG-SCWWWT					
	1507501-005		1507501-006					
	PQL	Result	PQL	Result				
Aluminum	91	246	79.4	U		---		
Antimony	7.28	U	6.35	U		---		
Arsenic	4.55	U	3.97	U		---		
Barium	8.19	23	7.15	23.4	2%	b		
Beryllium	3.64	U	3.18	U		---		
Cadmium	1.55	5.72	1.35	1.51	116%	b, J		
Calcium	910	10700	794	5430	65%	J		
Chromium	18.2	U	15.9	U		---		
Cobalt	2.46	U	2.14	U		---		
Copper	28.2	U	24.6	U		---		
Iron	45.5	184	39.7	65.1	95%	b, J		
Lead	11.8	U	10.3	U		---		
Magnesium	910	1490	794	1130	27%	b		
Manganese	7.28	53.3	6.35	84.2	45%	J		
Mercury	0.146	U	0.0976	U		---		
Nickel	36.4	U	31.8	U		---		
Phosphate, Total (as P)	184	1520	126	1120	30%	a		
Potassium	910	28500	794	16300	54%	J		
Selenium	15.5	U	13.5	U		---		
Silver	2.73	U	2.38	U		---		
Sodium	910	U	794	U		---		
Thallium	7.28	U	6.35	U		---		
Vanadium	4.55	U	3.97	U		---		
Zinc	91	190	79.4	162	16%	b		

a: Sample concentration is greater than five times the PQL

b: Sample concentration is less than five times the PQL

J: RPD is greater than the control limit

U: Compound was not detected

mg/kg: milligrams per kilogram [All values in mg/kg]

PQL: Practical Quantitation Limit

*: RPD= | S-D | x 100 / (S+D) / 2 where S: Original Sample; D: Duplicate Sample

RPD: Relative percent difference

Table A5-4: Field Duplicate Sample Results and RPDs for OU2-0-SD-SCWWT

Analyte	Sample Identification				RPD (%) [*]	Qualifier		
	OU2-0-SD-SCWWT		OU2-9-SD-SCWWT					
	1507540-005		1507540-006					
	PQL	Result	PQL	Result				
Aluminum	12.4	4000	12.8	4500	12%	a		
Antimony	4.95	211	5.11	164	25%	a		
Arsenic	3.1	376	3.19	508	30%	a		
Barium	5.57	58.5	5.75	162	94%	J		
Beryllium	2.48	U	2.55	U	---			
Cadmium	1.05	70.2	1.09	99.8	35%	a		
Calcium	1240	72400	1280	43700	49%	J		
Chromium	12.4	34.4	12.8	16.2	72%	b		
Cobalt	1.67	2.09	1.72	2.98	35%	b		
Copper	19.2	467	19.8	388	18%	a		
Iron	61.9	9440	63.9	21400	78%	J		
Lead	805	9350	83	6080	42%	J		
Magnesium	1240	19000	1280	13100	37%	J		
Manganese	49.5	1800	51.1	1670	7%	a		
Mercury	0.0471	2.19	0.0459	1.5	37%	J		
Nickel	24.8	U	25.5	U	---			
Phosphate, Total (as P)	52.8	1530	52.5	1230	22%	a		
Potassium	124	1690	128	1240	31%	a		
Selenium	10.5	U	10.9	U	---			
Silver	1.86	43.5	1.92	15.3	96%	J		
Sodium	124	243	128	150	47%	b		
Thallium	4.95	U	5.11	6.62	---			
Vanadium	0.619	7.24	0.639	3.8	62%	J		
Zinc	6190	14300	6390	22200	43%	b		

a: Sample concentration is greater than five times the PQL

b: Sample concentration is less than five times the PQL

J: RPD is greater than the control limit

U: Compound was not detected

mg/kg: milligrams per kilogram [All values in mg/kg]

PQL: Practical Quantitation Limit

*: RPD= | S-D | x 100 / (S+D) / 2 where S: Original Sample; D: Duplicate Sample

RPD: Relative percent difference

Table A5-5: Field Duplicate Sample Results and RPDs for OU2-0-SO-50P-0

Analyte	Sample Identification				RPD (%) [*]	Qualifier		
	OU2-0-SO-50P-0		OU2-9-SO-50P-0					
	1507540-018		1507540-019					
	PQL	Result	PQL	Result				
Aluminum	108	30100	98	31100	3%	a		
Antimony	4.33	6.41	3.92	6.79	6%	b		
Arsenic	2.71	10.9	2.45	12.9	17%	b		
Barium	4.87	295	4.41	329	11%	a		
Beryllium	2.17	U	1.96	U	---			
Cadmium	0.92	2.33	0.833	2.46	5%	b		
Calcium	1080	7730	980	7820	1%	a		
Chromium	10.8	35.2	9.8	33.6	5%	b		
Cobalt	1.46	10.4	1.32	11.2	7%	a		
Copper	16.8	39.6	15.2	42	6%	b		
Iron	54.1	25900	49	26500	2%	a		
Lead	7.04	151	6.37	170	12%	a		
Magnesium	1080	6390	980	6430	1%	a		
Manganese	43.3	741	39.2	790	6%	a		
Mercury	0.0398	0.221	0.0414	0.235	6%	a		
Nickel	21.7	U	19.6	U	---			
Phosphate, Total (as P)	47	1420	50.7	1480	4%	a		
Potassium	1080	6430	980	6680	4%	a		
Selenium	9.2	U	8.33	U	---			
Silver	1.62	U	1.47	U	---			
Sodium	108	735	98	686	7%	a		
Thallium	4.33	U	3.92	U	---			
Vanadium	0.541	50	0.49	50.6	1%	a		
Zinc	54.1	263	49	285	8%	b		

a: Sample concentration is greater than five times the PQL

b: Sample concentration is less than five times the PQL

U: Compound was not detected

mg/kg: milligrams per kilogram [All values in mg/kg]

PQL: Practical Quantitation Limit

*: RPD= | S-D | x 100 / (S+D) / 2 where S: Original Sample; D: Duplicate Sample

RPD: Relative percent difference

Table A5-6: Field Duplicate Sample Results and RPDs for OU2-0-SO-48S-5.2

Analyte	Sample Identification				RPD (%) [*]	Qualifier		
	OU2-0-SO-48S-5.2		OU2-9-SO-48S-5.2					
	1507540-034		1507540-035					
	PQL	Result	PQL	Result				
Aluminum	162	24800	155	25100	1%	a		
Antimony	6.47	U	6.21	7.25	---			
Arsenic	4.04	16.2	3.88	19.8	20%	b		
Barium	7.28	325	6.98	319	2%	a		
Beryllium	3.24	U	3.1	U	---			
Cadmium	1.38	2.77	1.32	2.92	5%	b		
Calcium	1620	42700	1550	46000	7%	a		
Chromium	16.2	38.7	15.5	38.6	0%	b		
Cobalt	2.18	7.41	2.09	7.54	2%	b		
Copper	25.1	29.5	24	35.2	18%	b		
Iron	80.9	18600	77.6	18900	2%	a		
Lead	10.5	85.8	20.2	147	53%	J		
Magnesium	162	8630	155	8530	1%	a		
Manganese	6.47	424	6.21	465	9%	a		
Mercury	0.0602	0.118	0.0553	0.264	76%	b, J		
Nickel	32.4	U	31	U	---			
Phosphate, Total (as P)	79.7	970	80.2	919	5%	a		
Potassium	162	6610	155	6490	2%	a		
Selenium	13.8	U	13.2	U	---			
Silver	2.43	U	2.33	U	---			
Sodium	162	631	155	543	15%	b		
Thallium	6.47	U	6.21	U	---			
Vanadium	0.809	52.3	0.776	55.7	6%	a		
Zinc	80.9	350	155	404	14%	b		

a: Sample concentration is greater than five times the PQL

b: Sample concentration is less than five times the PQL

J: RPD is greater than the control limit

U: Compound was not detected

mg/kg: milligrams per kilogram [All values in mg/kg]

PQL: Practical Quantitation Limit

*: RPD= | S-D | x 100 / (S+D) / 2 where S: Original Sample; D: Duplicate Sample

RPD: Relative percent difference

Table A5-7: Field Duplicate Sample Results and RPDs for OU3-0-SO-WR-5F-0

Analyte	Sample Identification				RPD (%) [*]	Qualifier		
	OU3-0-SO-WR-5F-0		OU3-9-SO-WR-5F-0					
	1508019-017		1508019-018					
	PQL	Result	PQL	Result				
Aluminum	9.53	4650	9.43	4390	6%	a		
Antimony	3.81	208	3.02	176	17%	a		
Arsenic	23.8	508	1.89	328	43%	J		
Barium	4.29	55.3	3.39	54.4	2%	a		
Beryllium	1.91	U	1.51	U	---			
Cadmium	0.81	91.4	0.641	86.3	6%	a		
Calcium	953	53900	943	45000	18%	a		
Chromium	9.53	34.7	7.54	22.9	41%	b		
Cobalt	1.29	3.44	1.02	3.86	12%	b		
Copper	14.8	392	11.7	317	21%	a		
Iron	47.6	14900	47.1	18100	19%	a		
Lead	619	5310	123	1940	93%	J		
Magnesium	953	19800	943	15700	23%	a		
Manganese	38.1	3350	75.4	1340	86%	J		
Mercury	0.0346	4.06	0.0358	1.54	90%	J		
Nickel	19.1	U	15.1	U	---			
Phosphate, Total (as P)	49.1	1300	49.1	1310	1%	a		
Potassium	95.3	1750	94.3	1300	30%	a		
Selenium	8.1	U	6.41	U	---			
Silver	1.43	23.7	1.13	20.3	15%	a		
Sodium	95.3	333	94.3	172	64%	b		
Thallium	3.81	12	3.02	5.96	67%	b		
Vanadium	0.476	7.42	0.471	5.46	30%	a		
Zinc	4760	17900	4710	18000	1%	b		

a: Sample concentration is greater than five times the PQL

b: Sample concentration is less than five times the PQL

J: RPD is greater than the control limit

U: Compound was not detected

mg/kg: milligrams per kilogram [All values in mg/kg]

PQL: Practical Quantitation Limit

*: RPD= | S-D | x 100 / (S+D) / 2 where S: Original Sample; D: Duplicate Sample

RPD: Relative percent difference

Table A5-8: Field Duplicate Sample Results and RPDs for OU2-0-SO-34S-0.501

Analyte	Sample Identification				RPD (%) [*]	Qualifier		
	OU2-0-SO-34S-0.501		OU2-9-SO-34S-0.501					
	1508082-015		1508082-014					
	PQL	Result	PQL	Result				
Aluminum	105	7140	117	7530	5%	a		
Antimony	33.6	814	37.4	803	1%	a		
Arsenic	21	684	23.4	663	3%	a		
Barium	3.78	91.5	4.21	89.1	3%	a		
Beryllium	1.68	U	1.87	U	---			
Cadmium	0.715	105	0.794	123	16%	a		
Calcium	1050	24600	1170	31600	25%	a		
Chromium	8.41	28.8	9.35	33.4	15%	b		
Cobalt	1.14	2.81	1.26	2.83	1%	b		
Copper	130	1200	145	1450	19%	a		
Iron	52.5	14700	58.4	15300	4%	a		
Lead	547	15700	608	16100	3%	a		
Magnesium	1050	8620	1170	10200	17%	a		
Manganese	33.6	2130	37.4	2870	30%	a		
Mercury	0.439	26.4	0.409	31.6	18%	a		
Nickel	16.8	U	18.7	U	---			
Phosphate, Total (as P)	54.8	1540	54.1	1370	12%	a		
Potassium	1050	1960	1170	1970	1%	b		
Selenium	7.15	8.35	7.94	9.43	12%	b		
Silver	1.26	96.1	1.4	89.3	7%	a		
Sodium	105	209	117	198	5%	b		
Thallium	3.36	3.66	3.74	U	---			
Vanadium	0.525	16.6	0.584	17.3	4%	a		
Zinc	4200	25100	4670	30100	18%	a		

a: Sample concentration is greater than five times the PQL

b: Sample concentration is less than five times the PQL

U: Compound was not detected

mg/kg: milligrams per kilogram [All values in mg/kg]

PQL: Practical Quantitation Limit

*: RPD= | S-D | x 100 / (S+D) / 2 where S: Original Sample; D: Duplicate Sample

RPD: Relative percent difference

Table A5-9: Field Duplicate Sample Results and RPDs for OU3-0-SO-WR-5B-5.8

Analyte	Sample Identification				RPD (%)*	Qualifier		
	OU3-0-SO-WR-5B-5.8		OU3-9-SO-WR-5B-5.8					
	1508082-024		1508082-027					
	PQL	Result	PQL	Result				
Aluminum	264	18800	287	18900	1%	a		
Antimony	8.44	9.58	9.19	U	---			
Arsenic	5.28	755	5.74	677	11%	a		
Barium	9.5	166	10.3	168	1%	a		
Beryllium	4.22	U	4.59	U	---			
Cadmium	1.79	1.98	1.95	3.06	43%	b		
Calcium	2640	12000	2870	12900	7%	b		
Chromium	21.1	26.8	23	25.9	3%	b		
Cobalt	2.85	6.25	3.1	6.33	1%	b		
Copper	32.7	U	35.6	U	---			
Iron	132	16700	144	17500	5%	a		
Lead	13.7	31.2	14.9	32.8	5%	b		
Magnesium	2640	5320	2870	5410	2%	b		
Manganese	8.44	273	9.19	262	4%	a		
Mercury	0.0963	3.14	0.0995	8.59	93%	J		
Nickel	42.2	U	45.9	U	---			
Phosphate, Total (as P)	130	2920	137	881	107%	J		
Potassium	2640	2930	2870	2910	1%	b		
Selenium	17.9	U	19.5	U	---			
Silver	3.17	U	3.45	U	---			
Sodium	264	423	287	477	12%	b		
Thallium	8.44	U	9.19	U	---			
Vanadium	1.32	39.8	1.44	35.7	11%	a		
Zinc	106	217	115	252	15%	b		

a: Sample concentration is greater than five times the PQL

b: Sample concentration is less than five times the PQL

J: RPD is greater than the control limit

U: Compound was not detected

mg/kg: milligrams per kilogram [All values in mg/kg]

PQL: Practical Quantitation Limit

*: RPD= | S-D | x 100 / (S+D) / 2 where S: Original Sample; D: Duplicate Sample

RPD: Relative percent difference

Table A5-10: Field Duplicate Sample Results and RPDs for OU3-0-SO-ER-1J-0.501

Analyte	Sample Identification				RPD (%) [*]	Qualifier		
	OU3-0-SO-ER-1J-0.501		OU3-9-SO-ER-1J-0.501					
	1508082-042		1508082-043					
	PQL	Result	PQL	Result				
Aluminum	102	30100	106	25300	17%	a		
Antimony	3.26	11.3	3.39	12	6%	b		
Arsenic	2.04	23.4	2.12	29.6	23%	a		
Barium	3.67	208	3.81	190	9%	a		
Beryllium	1.63	U	1.7	U	---			
Cadmium	0.693	2.24	0.72	2	11%	b		
Calcium	1020	6720	1060	4030	50%	b, J		
Chromium	8.16	40.4	8.48	36.4	10%	b		
Cobalt	1.1	11	1.14	10.6	4%	a		
Copper	12.6	42.1	13.1	42.5	1%	b		
Iron	51	24700	53	26400	7%	a		
Lead	6.63	183	6.89	184	1%	a		
Magnesium	1020	5250	1060	4810	9%	b		
Manganese	326	721	339	670	7%	b		
Mercury	0.0396	0.157	0.0412	0.142	10%	b		
Nickel	16.3	16.6	17	17.9	8%	b		
Phosphate, Total (as P)	53.4	671	51.5	644	4%	a		
Potassium	1020	6450	1060	5720	12%	a		
Selenium	6.93	U	7.2	U	---			
Silver	1.22	1.44	1.27	1.5	4%	b		
Sodium	102	338	106	273	21%	b		
Thallium	3.26	U	3.39	U	---			
Vanadium	0.51	58.4	0.53	65.4	11%	a		
Zinc	51	299	53	286	4%	a		

a: Sample concentration is greater than five times the PQL

b: Sample concentration is less than five times the PQL

J: RPD is greater than the control limit

U: Compound was not detected

mg/kg: milligrams per kilogram [All values in mg/kg]

PQL: Practical Quantitation Limit

*: RPD= | S-D | x 100 / (S+D) / 2 where S: Original Sample; D: Duplicate Sample

RPD: Relative percent difference

Table A5-11: Field Duplicate Sample Results and RPDs for OU2-0-SO-32V-0.501

Analyte	Sample Identification				RPD (%) [*]	Qualifier		
	OU2-0-SO-32V-0.501		OU2-9-SO-32V-0.501					
	1508082-062		1508082-061					
	PQL	Result	PQL	Result				
Aluminum	108	6600	109	5670	15%	a		
Antimony	4.34	252	4.38	257	2%	a		
Arsenic	2.71	234	2.73	240	3%	a		
Barium	4.88	88.2	4.92	106	18%	a		
Beryllium	2.17	U	2.19	U	---			
Cadmium	0.922	33.7	0.93	31.2	8%	a		
Calcium	1080	28400	1090	30200	6%	a		
Chromium	10.8	21.2	10.9	19.2	10%	b		
Cobalt	1.46	4.49	1.48	3.16	35%	b		
Copper	16.8	433	17	409	6%	a		
Iron	54.2	11900	54.7	12500	5%	a		
Lead	70.5	3870	71.1	3690	5%	a		
Magnesium	1080	7130	1090	7490	5%	a		
Manganese	43.4	1730	43.8	1310	28%	a		
Mercury	0.0428	6.25	0.0415	7.44	17%	a		
Nickel	21.7	U	21.9	U	---			
Phosphate, Total (as P)	52.4	1140	52.9	1190	4%	a		
Potassium	1080	1800	1090	1660	8%	b		
Selenium	9.22	U	9.3	U	---			
Silver	1.63	14.5	1.64	13.4	8%	a		
Sodium	108	217	109	188	14%	b		
Thallium	4.34	5.96	4.38	5.37	10%	b		
Vanadium	0.542	10.3	0.547	8.43	20%	a		
Zinc	2710	9420	2730	8640	9%	b		

a: Sample concentration is greater than five times the PQL

b: Sample concentration is less than five times the PQL

U: Compound was not detected

mg/kg: milligrams per kilogram [All values in mg/kg]

PQL: Practical Quantitation Limit

*: RPD= | S-D | x 100 / (S+D) / 2 where S: Original Sample; D: Duplicate Sample

RPD: Relative percent difference

Table A5-12: Field Duplicate Sample Results and RPDs for OU3-0-SO-ER-3M-02

Analyte	Sample Identification				RPD (%) [*]	Qualifier		
	OU3-0-SO-ER-3M-02		OU3-9-SO-ER-3M-02					
	1508110-017		1508110-018					
	PQL	Result	PQL	Result				
Aluminum	144	36200	143	33400	8%	a		
Antimony	4.6	U	4.57	U	---			
Arsenic	2.88	9.31	2.86	10.3	10%	b		
Barium	5.18	447	5.14	409	9%	a		
Beryllium	2.3	U	2.29	U	---			
Cadmium	0.979	1.56	0.972	1.32	17%	b		
Calcium	1440	13800	1430	14600	6%	a		
Chromium	11.5	38.6	11.4	34.6	11%	b		
Cobalt	1.55	11.3	1.54	13.6	18%	a		
Copper	17.8	32	17.7	31.2	3%	b		
Iron	72	25900	71.4	26200	1%	a		
Lead	7.48	17.3	7.43	17.2	1%	b		
Magnesium	1440	8240	1430	8090	2%	a		
Manganese	4.6	560	91.4	583	4%	a		
Mercury	0.0488	U	0.0552	U	---			
Nickel	23	U	22.9	U	---			
Phosphate, Total (as P)	65.7	995	67.7	968	3%	a		
Potassium	1440	7510	1430	6610	13%	b		
Selenium	9.79	U	9.72	U	---			
Silver	1.73	U	1.71	U	---			
Sodium	144	588	143	472	22%	b		
Thallium	4.6	U	4.57	U	---			
Vanadium	0.72	48	0.714	45.6	5%	a		
Zinc	57.6	114	57.1	110	4%	b		

a: Sample concentration is greater than five times the PQL

b: Sample concentration is less than five times the PQL

U: Compound was not detected

mg/kg: milligrams per kilogram [All values in mg/kg]

PQL: Practical Quantitation Limit

*: RPD= | S-D | x 100 / (S+D) / 2 where S: Original Sample; D: Duplicate Sample

RPD: Relative percent difference

Table A5-13: Field Duplicate Sample Results and RPDs for OU3-0-FI-NPCWR-RS1

Analyte	Sample Identification				RPD (%) [*]	Qualifier		
	OU3-0-FI-NPCWR-RS1		OU3-9-FI-NPCWR-MIX					
	1508273-005		1508273-004					
	PQL	Result	PQL	Result				
Aluminum	109	U	111	U	---			
Antimony	8.71	U	8.84	U	---			
Arsenic	5.45	U	5.53	U	---			
Barium	9.8	U	9.95	U	---			
Beryllium	4.36	U	4.42	U	---			
Cadmium	1.85	U	1.88	U	---			
Calcium	1090	29600	1110	35100	17%	a		
Chromium	21.8	U	22.1	U	---			
Cobalt	2.94	U	2.98	U	---			
Copper	33.8	U	34.3	U	---			
Iron	54.5	155	55.3	128	19%	b		
Lead	14.2	19.9	14.4	U	---			
Magnesium	1090	1530	1110	1680	9%	b		
Manganese	8.71	85.7	8.84	71.7	18%	a		
Mercury	0.147	0.336	0.141	U	---			
Nickel	43.6	U	44.2	U	---			
Phosphate, Total (as P)	975	21000	968	17900	16%	a		
Potassium	1090	11900	1110	12800	7%	a		
Selenium	18.5	U	18.8	U	---			
Silver	3.27	U	3.32	U	---			
Sodium	1090	3560	1110	3610	1%	b		
Thallium	8.71	U	8.84	U	---			
Vanadium	5.45	U	5.53	U	---			
Zinc	109	324	111	244	28%	b		

a: Sample concentration is greater than five times the PQL

b: Sample concentration is less than five times the PQL

U: Compound was not detected

mg/kg: milligrams per kilogram [All values in mg/kg]

PQL: Practical Quantitation Limit

*: RPD= | S-D | x 100 / (S+D) / 2 where S: Original Sample; D: Duplicate Sample

RPD: Relative percent difference

Table A5-14: Field Duplicate Sample Results and RPDs for OU2-0-FI-SCBNPRR-SD1

Analyte	Sample Identification				RPD (%) [*]	Qualifier		
	OU2-0-FI-SCBNPRR-SD1		OU2-9-FI-SCBNPRR-SD1					
	1508366-003		1508366-004					
	PQL	Result	PQL	Result				
Aluminum	102	U	101	U	---			
Antimony	8.15	U	8.1	U	---			
Arsenic	5.1	U	5.06	U	---			
Barium	9.17	11	9.11	U	---			
Beryllium	4.08	U	4.05	U	---			
Cadmium	1.73	U	1.72	U	---			
Calcium	1020	32100	1010	11100	97%	J		
Chromium	20.4	29	20.3	U	---			
Cobalt	2.75	U	2.73	U	---			
Copper	31.6	U	31.4	U	---			
Iron	51	199	50.6	92	74%	b, J		
Lead	13.3	U	13.2	U	---			
Magnesium	1020	1420	1010	1040	31%	b		
Manganese	8.15	21.8	8.1	U	---			
Mercury	0.143	0.295	0.135	0.304	3%	b		
Nickel	40.8	U	40.5	U	---			
Phosphate, Total (as P)	910	17000	976	19100	12%	a		
Potassium	1020	10200	1010	10400	2%	a		
Selenium	17.3	U	17.2	U	---			
Silver	3.06	U	3.04	U	---			
Sodium	1020	3270	1010	3060	7%	b		
Thallium	8.15	U	8.1	U	---			
Vanadium	5.1	U	5.06	U	---			
Zinc	102	294	101	218	30%	b		

a: Sample concentration is greater than five times the PQL

b: Sample concentration is less than five times the PQL

J: RPD is greater than the control limit

U: Compound was not detected

mg/kg: milligrams per kilogram [All values in mg/kg]

PQL: Practical Quantitation Limit

*: RPD= | S-D | x 100 / (S+D) / 2 where S: Original Sample; D: Duplicate Sample

RPD: Relative percent difference

Table A5-15: Field Duplicate Sample Results and RPDs for OU2-0-BM-SCBNPRR

Analyte	Sample Identification				RPD (%) [*]	Qualifier		
	OU2-0-BM-SCBNPRR		OU2-9-BM-SCBNPRR					
	1508366-005		1508366-006					
	PQL	Result	PQL	Result				
Aluminum	86	344	90.4	437	24%	b		
Antimony	6.88	U	7.23	10.8	---			
Arsenic	4.3	14.5	4.52	25.9	56%	J		
Barium	7.74	38.6	8.14	98.8	88%	J		
Beryllium	3.44	U	3.62	U	---			
Cadmium	1.46	3.81	1.54	5.17	30%	b		
Calcium	8600	146000	9040	344000	81%	J		
Chromium	17.2	U	18.1	U	---			
Cobalt	2.32	3.33	2.44	4.92	39%	b		
Copper	26.7	61.8	28	119	63%	b, J		
Iron	43	2200	45.2	1820	19%	a		
Lead	11.2	117	11.8	284	83%	J		
Magnesium	860	1020	904	1150	12%	b		
Manganese	68.8	1900	72.3	4410	80%	J		
Mercury	0.119	0.511	0.128	0.264	64%	b		
Nickel	34.4	U	36.2	U	---			
Phosphate, Total (as P)	915	1720	855	1600	7%	b		
Potassium	860	2520	904	1970	24%	b		
Selenium	14.6	U	15.4	U	---			
Silver	2.58	U	2.71	3.59	---			
Sodium	860	3300	904	4000	19%	b		
Thallium	6.88	U	7.23	U	---			
Vanadium	4.3	U	4.52	U	---			
Zinc	860	1070	904	1420	28%	b		

a: Sample concentration is greater than five times the PQL

b: Sample concentration is less than five times the PQL

J: RPD is greater than the control limit

U: Compound was not detected

mg/kg: milligrams per kilogram [All values in mg/kg]

PQL: Practical Quantitation Limit

*: RPD= | S-D | x 100 / (S+D) / 2 where S: Original Sample; D: Duplicate Sample

RPD: Relative percent difference

Table A5-16: Field Duplicate Sample Results and RPDs for OU3-0-BM-NPCWR

Analyte	Sample Identification				RPD (%) [*]	Qualifier		
	OU3-0-BM- NPCWR		OU3-9-BM- NPCWR					
	1508394-003		1508394-004					
	PQL	Result	PQL	Result				
Aluminum	37.6	158	40.8	169	7%	b		
Antimony	12	U	13.1	13.2	---			
Arsenic	7.52	13.8	8.16	24.2	55%	b		
Barium	13.5	59.2	14.7	133	77%	b, J		
Beryllium	6.02	U	6.53	U	---			
Cadmium	2.56	2.98	2.78	U	---			
Calcium	3760	138000	4080	219000	45%	J		
Chromium	30.1	U	32.7	U	---			
Cobalt	4.06	U	4.41	U	---			
Copper	46.6	U	50.6	U	---			
Iron	18.8	671	20.4	1180	55%	J		
Lead	19.6	112	21.2	105	6%	b		
Magnesium	376	1030	408	1120	8%	b		
Manganese	150	3950	163	10200	88%	J		
Mercury	0.131	0.42	0.151	U	---			
Nickel	57.1	U	61.3	U	---			
Phosphate, Total (as P)	1000	2850	933	2620	8%	b		
Potassium	376	2650	408	3000	12%	a		
Selenium	25.6	U	27.8	U	---			
Silver	4.51	U	4.9	U	---			
Sodium	376	3410	408	3980	15%	a		
Thallium	12	U	13.1	U	---			
Vanadium	1.88	U	2.04	U	---			
Zinc	150	838	163	743	12%	b		

a: Sample concentration is greater than five times the PQL

b: Sample concentration is less than five times the PQL

J: RPD is greater than the control limit

U: Compound was not detected

mg/kg: milligrams per kilogram [All values in mg/kg]

PQL: Practical Quantitation Limit

*: RPD= | S-D | x 100 / (S+D) / 2 where S: Original Sample; D: Duplicate Sample

RPD: Relative percent difference

Table A5-17: Field Duplicate Sample Results and RPDs for OU2-0-GW-P2-5

Analyte	PQL	Sample Identification		RPD (%)*	Qualifier
		OU2-0-GW-P2-5	OU2-9-GW-P2-5		
		1508512-001	1508512-002		
Aluminum (Total)	0.1	0.172	U	---	
Antimony (Total)	0.002	0.467	0.458	2%	a
Arsenic (Total)	0.002	0.419	0.408	3%	a
Barium (Total)	0.002	0.118	0.116	2%	
Beryllium (Total)	0.002	U	U	---	
Cadmium (Total)	0.0005	0.00344	0.00105	106%	b, J
Calcium (Total)	10	62.4	62.6	0%	a
Chromium (Total)	0.002	U	U	---	
Cobalt (Total)	0.004	U	U	---	
Copper (Total)	0.002	0.0823	0.0289	96%	J
Iron (Total)	0.1	7.12	6.9	3%	a
Lead (Total)	0.002	0.969	0.3	105%	J
Magnesium (Total)	1	13	13	0%	a
Manganese (Total)	0.002	1.67	1.65	1%	a
Mercury (Total)	0.00015	0.00166	0.000452	114%	b, J
Nickel (Total)	0.002	0.00369	0.0038	3%	b
Potassium (Total)	1	3.1	3.05	2%	b
Selenium (Total)	0.002	U	U	---	
Silver (Total)	0.002	0.00399	U	---	
Sodium (Total)	1	17.5	17.7	1%	a
Thallium (Total)	0.002	U	U	---	
Vanadium (Total)	0.005	U	U	---	
Zinc (Total)	0.025	2.73	2.28	18%	a
Aluminum (Dissolved)	0.1	U	U	---	
Antimony (Dissolved)	0.002	0.466	0.462	1%	a
Arsenic (Dissolved)	0.002	0.399	0.397	1%	a
Barium (Dissolved)	0.002	0.118	0.117	1%	a
Beryllium (Dissolved)	0.002	U	U	---	
Cadmium (Dissolved)	0.0005	U	U	---	
Calcium (Dissolved)	10	60.4	61.1	1%	a
Chromium (Dissolved)	0.002	U	0.00579	---	
Cobalt (Dissolved)	0.004	U	U	---	
Copper (Dissolved)	0.002	U	0.00449	---	
Iron (Dissolved)	0.1	6.81	7.02	3%	a
Lead (Dissolved)	0.002	0.029	0.0288	1%	a
Magnesium (Dissolved)	1	12.8	13.2	3%	a
Manganese (Dissolved)	0.002	1.51	1.54	2%	a
Mercury (Dissolved)	0.00015	U	U	---	
Nickel (Dissolved)	0.002	0.00238	0.00345	37%	b
Potassium (Dissolved)	1	2.87	2.94	2%	b
Selenium (Dissolved)	0.002	U	U	---	
Silver (Dissolved)	0.002	U	U	---	
Sodium (Dissolved)	1	17.4	17.8	2%	a
Thallium (Dissolved)	0.002	U	U	---	
Vanadium (Dissolved)	0.005	U	U	---	
Zinc (Dissolved)	0.025	2.21	2.22	0%	a
Alkalinity (as CaCO ₃)	10	189	193	2%	a
Chloride	1	32.9	32.9	0%	a
Hardness (as CaCO ₃)	10	209	210	0%	a
Nitrate (as N)	0.01	U	0.0194	---	
Phosphate, Total (as P)	0.05	0.186	0.186	0%	b
Sulfate	7.5	32.7	32.3	1%	b
Total Dissolved Solids	20	316	324	3%	a
Total Suspended Solids	3	12	12	0%	b

a: Sample concentration is greater than five times the PQL

b: Sample concentration is less than five times the PQL

J: RPD is greater than the control limit

U: Compound was not detected

mg/L: milligrams per liter [All values in mg/L]

PQL: Practical Quantitation Limit

*: RPD= | S-D | x 100 / (S+D) / 2 where S: Original Sample; D: Duplicate Sample

RPD: Relative percent difference

Table A5-18: Field Duplicate Sample Results and RPDs for OU2-0-GW-P2-4

Analyte	PQL	Sample Identification		RPD (%)*	Qualifier
		OU2-0-GW-P2-4	OU2-9-GW-P2-4		
		1508530-001	1508530-002		
Aluminum (Total)	0.1	0.141	0.165	16%	b
Antimony (Total)	0.002	U	U	---	
Arsenic (Total)	0.002	0.0369	0.0355	4%	a
Barium (Total)	0.002	0.0315	0.0315	0%	a
Beryllium (Total)	0.002	U	U	---	
Cadmium (Total)	0.0005	U	U	---	
Calcium (Total)	10	252	251	0%	a
Chromium (Total)	0.002	U	U	---	
Cobalt (Total)	0.004	0.012	0.0114	5%	b
Copper (Total)	0.002	U	U	---	
Iron (Total)	0.1	4.73	4.6	3%	a
Lead (Total)	0.002	0.00364	0.00597	48%	b
Magnesium (Total)	10	65.9	65.9	0%	a
Manganese (Total)	0.01	3.99	3.77	6%	a
Mercury (Total)	0.00015	U	U	---	
Nickel (Total)	0.002	0.00921	0.00881	4%	b
Potassium (Total)	1	3.83	3.56	7%	b
Selenium (Total)	0.002	U	U	---	
Silver (Total)	0.002	U	U	---	
Sodium (Total)	10	81.2	81.3	0%	a
Thallium (Total)	0.002	U	U	---	
Vanadium (Total)	0.005	U	U	---	
Zinc (Total)	0.025	3.23	3.11	4%	a
Aluminum (Dissolved)	0.1	U	U	---	
Antimony (Dissolved)	0.002	U	U	---	
Arsenic (Dissolved)	0.002	0.0372	0.0372	0%	a
Barium (Dissolved)	0.002	0.0295	0.0298	1%	a
Beryllium (Dissolved)	0.002	U	U	---	
Cadmium (Dissolved)	0.0005	U	U	---	
Calcium (Dissolved)	10	246	249	1%	a
Chromium (Dissolved)	0.002	U	U	---	
Cobalt (Dissolved)	0.004	0.0118	0.0118	0%	b
Copper (Dissolved)	0.002	U	U	---	
Iron (Dissolved)	0.1	5.38	5.55	3%	a
Lead (Dissolved)	0.002	U	U	---	
Magnesium (Dissolved)	10	65.3	65.8	1%	a
Manganese (Dissolved)	0.01	4.08	3.86	6%	a
Mercury (Dissolved)	0.00015	U	U	---	
Nickel (Dissolved)	0.002	0.00871	0.00909	4%	b
Potassium (Dissolved)	1	3.73	3.88	4%	b
Selenium (Dissolved)	0.002	U	U	---	
Silver (Dissolved)	0.002	U	U	---	
Sodium (Dissolved)	10	80	81.3	2%	a
Thallium (Dissolved)	0.002	U	U	---	
Vanadium (Dissolved)	0.005	U	U	---	
Zinc (Dissolved)	0.025	3.29	3.06	7%	a
Alkalinity (as CaCO ₃)	10	113	110	3%	a
Chloride	10	417	437	5%	a
Hardness (as CaCO ₃)	10	901	899	0%	a
Nitrate (as N)	0.01	0.395	0.421	6%	a
Phosphate, Total (as P)	0.05	0.214	0.214	0%	b
Sulfate	75	427	449	5%	a
Total Dissolved Solids	20	1430	1460	2%	a
Total Suspended Solids	3	10.4	7.2	36%	b

a: Sample concentration is greater than five times the PQL

b: Sample concentration is less than five times the PQL

U: Compound was not detected

mg/L: milligrams per liter [All values in mg/L]PQL: Practical Quantitation Limit

*: RPD= | S-D | x 100 / (S+D) / 2 where S: Original Sample; D: Duplicate Sample

RPD: Relative percent difference

Table A5-19: Field Duplicate Sample Results and RPDs for OU2-0-GW-FPT-6A

Analyte	PQL	Sample Identification		RPD (%)*	Qualifier
		OU2-0-GW-FPT-6A	OU2-9-GW-FPT-6A		
		1508543-001	1508543-002		
Aluminum (Total)	0.1	U	U	---	
Antimony (Total)	0.002	0.029	0.0287	1%	a
Arsenic (Total)	0.002	0.0159	0.0149	6%	a
Barium (Total)	0.002	0.0328	0.033	1%	a
Beryllium (Total)	0.002	U	U	---	
Cadmium (Total)	0.0005	0.136	0.139	2%	a
Calcium (Total)	10	564	554	2%	a
Chromium (Total)	0.002	U	U	---	
Cobalt (Total)	0.004	U	U	---	
Copper (Total)	0.002	0.0974	0.0953	2%	a
Iron (Total)	0.1	1.09	1.06	3%	a
Lead (Total)	0.002	0.0963	0.0894	7%	a
Magnesium (Total)	10	59	56.6	4%	a
Manganese (Total)	0.01	2.99	2.88	4%	a
Mercury (Total)	0.00015	0.000857	0.000792	8%	a
Nickel (Total)	0.002	0.0171	0.0172	1%	a
Potassium (Total)	1	2.41	2.52	4%	b
Selenium (Total)	0.002	U	U	---	
Silver (Total)	0.002	0.00249	0.00246	1%	b
Sodium (Total)	10	153	148	3%	a
Thallium (Total)	0.002	0.0204	0.0208	2%	a
Vanadium (Total)	0.005	U	U	---	
Zinc (Total)	0.25	46.9	42	11%	a
Aluminum (Dissolved)	0.1	U	U	---	
Antimony (Dissolved)	0.002	0.0309	0.0336	8%	a
Arsenic (Dissolved)	0.002	0.0171	0.0172	1%	a
Barium (Dissolved)	0.002	0.0337	0.0338	0%	a
Beryllium (Dissolved)	0.002	U	U	---	
Cadmium (Dissolved)	0.0005	0.129	0.127	2%	a
Calcium (Dissolved)	10	562	554	1%	a
Chromium (Dissolved)	0.002	U	U	---	
Cobalt (Dissolved)	0.004	0.00412	0.00415	1%	b
Copper (Dissolved)	0.002	0.0605	0.0599	1%	a
Iron (Dissolved)	0.1	0.997	1.06	6%	a
Lead (Dissolved)	0.002	0.0846	0.0833	2%	a
Magnesium (Dissolved)	10	58.8	57.6	2%	a
Manganese (Dissolved)	0.01	2.83	2.77	2%	a
Mercury (Dissolved)	0.00015	U	U	---	
Nickel (Dissolved)	0.002	0.0168	0.0168	0%	a
Potassium (Dissolved)	1	2.48	2.51	1%	b
Selenium (Dissolved)	0.002	U	U	---	
Silver (Dissolved)	0.002	U	U	---	
Sodium (Dissolved)	10	151	149	1%	a
Thallium (Dissolved)	0.002	0.0203	0.0201	1%	a
Vanadium (Dissolved)	0.005	U	U	---	
Zinc (Dissolved)	0.25	44.7	44.1	1%	a
Alkalinity (as CaCO ₃)	10	527	497	6%	a
Chloride	10	476	482	1%	a
Hardness (as CaCO ₃)	10	1650	1620	2%	a
Nitrate (as N)	0.01	0.0286	0.0352	21%	b
Phosphate, Total (as P)	0.05	U	U	---	
Sulfate	75	781	818	5%	a
Total Dissolved Solids	20	2360	2230	6%	a
Total Suspended Solids	3	5.6	3.6	43%	b

a: Sample concentration is greater than five times the PQL

b: Sample concentration is less than five times the PQL

U: Compound was not detected

mg/L: milligrams per liter [All values in mg/L]PQL: Practical Quantitation Limit

*: RPD= | S-D | x 100 / (S+D) / 2 where S: Original Sample; D: Duplicate Sample

RPD: Relative percent difference

Table A5-20: Field Duplicate Sample Results and RPDs for OU2-0-SW-SC180

Analyte	PQL	Sample Identification		RPD (%)*	Qualifier
		OU2-0-SW-SCI80	OU2-9-SW-SCI80		
		1509027-001, 1509256-001	1509027-002, 1509256-002		
Aluminum (Total)	0.1	U	U	---	
Antimony (Total)	0.002	0.0201	0.0195	3%	a
Arsenic (Total)	0.002	0.0212	0.0203	4%	a
Barium (Total)	0.002	0.0798	0.0776	3%	a
Beryllium (Total)	0.002	U	U	---	
Cadmium (Total)	0.0005	0.000593	0.000545	8%	b
Calcium (Total)	10	98.8	99.9	1%	a
Chromium (Total)	0.002	U	U	---	
Cobalt (Total)	0.004	U	U	---	
Copper (Total)	0.002	0.00725	0.00737	2%	b
Iron (Total)	0.1	0.132	0.127	4%	b
Lead (Total)	0.002	0.0336	0.0318	6%	a
Magnesium (Total)	1	26.3	26.8	2%	a
Manganese (Total)	0.002	0.113	0.111	2%	a
Mercury (Total)	0.00015	U	U	---	
Nickel (Total)	0.002	U	U	---	
Potassium (Total)	1	13.4	13.7	2%	a
Selenium (Total)	0.002	U	U	---	
Silver (Total)	0.002	U	U	---	
Sodium (Total)	10	160	162	1%	a
Thallium (Total)	0.002	U	U	---	
Vanadium (Total)	0.005	U	U	---	
Zinc (Total)	0.005	0.324	0.316	3%	a
Aluminum (Dissolved)	0.1	U	U	---	
Antimony (Dissolved)	0.002	0.0182	0.0187	3%	a
Arsenic (Dissolved)	0.002	0.0195	0.0198	2%	a
Barium (Dissolved)	0.002	0.0762	0.0771	1%	a
Beryllium (Dissolved)	0.002	U	U	---	
Cadmium (Dissolved)	0.0005	U	U	---	
Calcium (Dissolved)	10	93.7	97.9	4%	a
Chromium (Dissolved)	0.002	U	U	---	
Cobalt (Dissolved)	0.004	U	U	---	
Copper (Dissolved)	0.002	0.00558	0.00582	4%	b
Iron (Dissolved)	0.1	U	U	---	
Lead (Dissolved)	0.002	0.00586	0.00607	4%	b
Magnesium (Dissolved)	1	24.9	24.6	1%	a
Manganese (Dissolved)	0.002	0.107	0.108	1%	a
Mercury (Dissolved)	0.00015	U	U	---	
Nickel (Dissolved)	0.002	U	U	---	
Potassium (Dissolved)	1	12.7	12.7	0%	a
Selenium (Dissolved)	0.002	U	U	---	
Silver (Dissolved)	0.002	U	U	---	
Sodium (Dissolved)	10	146	153	5%	a
Thallium (Dissolved)	0.002	U	U	---	
Vanadium (Dissolved)	0.005	U	U	---	
Zinc (Dissolved)	0.005	0.294	0.297	1%	a
Alkalinity (as CaCO ₃)	10	159	162	2%	a
Chloride	10	301	299	1%	a
Hardness (as CaCO ₃)	10	355	360	1%	a
Nitrate (as N)	0.5	13.5	13.7	1%	a
Phosphate, Total (as P)	0.05	0.873	0.854	2%	a
Sulfate	75	98.2	98.4	0%	b
Total Dissolved Solids	20	868	856	1%	a
Total Suspended Solids	3	U	U	---	

a: Sample concentration is greater than five times the PQL

b: Sample concentration is less than five times the PQL

U: Compound was not detected

mg/L: milligrams per liter [All values in mg/L]

PQL: Practical Quantitation Limit

*: RPD= | S-D | x 100 / (S+D) / 2 where S: Original Sample; D: Duplicate Sample

RPD: Relative percent difference

Table A5-21: Field Duplicate Sample Results and RPDs for OU2-0-SW-SCBNPRR

Analyte	PQL	Sample Identification		RPD (%)*	Qualifier
		OU2-0-SW-SCBNPRR	OU2-9-SW-SCBNPRR		
		1509027-010, 1509283-007	1509027-011, 1509283-008		
Aluminum (Total)	0.1	U	U	---	
Antimony (Total)	0.002	0.00769	0.0077	0%	b
Arsenic (Total)	0.002	0.011	0.0112	2%	a
Barium (Total)	0.002	0.0479	0.0482	1%	a
Beryllium (Total)	0.002	U	U	---	
Cadmium (Total)	0.0005	0.000508	0.000516	2%	b
Calcium (Total)	10	133	134	1%	a
Chromium (Total)	0.002	U	U	---	
Cobalt (Total)	0.004	U	U	---	
Copper (Total)	0.002	0.00327	0.00315	4%	b
Iron (Total)	0.1	0.119	0.113	5%	b
Lead (Total)	0.002	0.0121	0.012	1%	a
Magnesium (Total)	1	34.9	34.3	2%	a
Manganese (Total)	0.002	0.117	0.111	5%	a
Mercury (Total)	0.00015	U	U	---	
Nickel (Total)	0.002	U	U	---	
Potassium (Total)	1	4.15	4.19	1%	b
Selenium (Total)	0.002	U	U	---	
Silver (Total)	0.002	U	U	---	
Sodium (Total)	10	77.6	78.8	2%	a
Thallium (Total)	0.002	U	U	---	
Vanadium (Total)	0.005	U	U	---	
Zinc (Total)	0.005	0.218	0.207	5%	a
Aluminum (Dissolved)	0.1	U	U	---	
Antimony (Dissolved)	0.002	0.00714	0.00675	6%	b
Arsenic (Dissolved)	0.002	0.01	0.00925	8%	b
Barium (Dissolved)	0.002	0.0476	0.0453	5%	a
Beryllium (Dissolved)	0.002	U	U	---	
Cadmium (Dissolved)	0.0005	U	U	---	
Calcium (Dissolved)	10	128	125	2%	a
Chromium (Dissolved)	0.002	U	U	---	
Cobalt (Dissolved)	0.004	U	U	---	
Copper (Dissolved)	0.002	0.00244	0.00237	3%	b
Iron (Dissolved)	0.1	U	U	---	
Lead (Dissolved)	0.002	0.00288	0.00269	7%	b
Magnesium (Dissolved)	1	32.4	31.7	2%	a
Manganese (Dissolved)	0.002	0.107	0.102	5%	a
Mercury (Dissolved)	0.00015	U	U	---	
Nickel (Dissolved)	0.002	U	U	---	
Potassium (Dissolved)	1	3.91	3.82	2%	b
Selenium (Dissolved)	0.002	U	U	---	
Silver (Dissolved)	0.002	U	U	---	
Sodium (Dissolved)	10	74.2	73.1	1%	a
Thallium (Dissolved)	0.002	U	U	---	
Vanadium (Dissolved)	0.005	U	U	---	
Zinc (Dissolved)	0.005	0.192	0.178	8%	a
Alkalinity (as CaCO ₃)	10	194	193	1%	a
Chloride	10	170	168	1%	a
Hardness (as CaCO ₃)	10	477	477	0%	a
Nitrate (as N)	0.01	0.0232	0.0152	42%	b
Phosphate, Total (as P)	0.05	U	0.0585	---	
Sulfate	75	178	172	3%	b
Total Dissolved Solids	20	648	696	7%	a
Total Suspended Solids	3	U	U	---	

a: Sample concentration is greater than five times the PQL

b: Sample concentration is less than five times the PQL

U: Compound was not detected

mg/L: milligrams per liter [All values in mg/L]PQL: Practical Quantitation Limit

*: RPD= | S-D | x 100 / (S+D) / 2 where S: Original Sample; D: Duplicate Sample

RPD: Relative percent difference

Table A5-22: Field Duplicate Sample Results and RPDs for OU2-0-SW-SCURTFB

Analyte	PQL	Sample Identification		RPD (%)*	Qualifier
		OU2-0-SW-SCURTFB	OU2-9-SW-SCURTFB		
		1509314-001, 1509092-001	1509314-002, 1509092-002		
Aluminum (Total)	0.1	U	U	---	
Antimony (Total)	0.002	0.00514	0.00497	3%	b
Arsenic (Total)	0.002	0.0099	0.00993	0%	b
Barium (Total)	0.002	0.0414	0.0391	6%	a
Beryllium (Total)	0.002	U	U	---	
Cadmium (Total)	0.0005	0.000622	0.00058	7%	b
Calcium (Total)	10	98.4	98.2	0%	a
Chromium (Total)	0.002	U	U	---	
Cobalt (Total)	0.004	U	U	---	
Copper (Total)	0.002	0.00206	0.00215	4%	b
Iron (Total)	0.1	0.275	0.282	3%	b
Lead (Total)	0.002	0.0177	0.0177	0%	a
Magnesium (Total)	1	19.2	19.3	1%	a
Manganese (Total)	0.002	0.155	0.154	1%	a
Mercury (Total)	0.00015	U	U	---	
Nickel (Total)	0.002	U	U	---	
Potassium (Total)	1	2.79	2.85	2%	b
Selenium (Total)	0.002	U	U	---	
Silver (Total)	0.002	U	U	---	
Sodium (Total)	10	65.8	65.8	0%	a
Thallium (Total)	0.002	U	U	---	
Vanadium (Total)	0.005	U	U	---	
Zinc (Total)	0.005	0.166	0.175	5%	a
Aluminum (Dissolved)	0.1	U	U	---	
Antimony (Dissolved)	0.002	0.00477	0.00491	3%	b
Arsenic (Dissolved)	0.002	0.00797	0.00815	2%	b
Barium (Dissolved)	0.002	0.0389	0.0405	4%	a
Beryllium (Dissolved)	0.002	U	U	---	
Cadmium (Dissolved)	0.0005	U	U	---	
Calcium (Dissolved)	10	92.1	92.6	1%	a
Chromium (Dissolved)	0.002	U	U	---	
Cobalt (Dissolved)	0.004	U	U	---	
Copper (Dissolved)	0.002	U	U	---	
Iron (Dissolved)	0.1	U	U	---	
Lead (Dissolved)	0.002	U	U	---	
Magnesium (Dissolved)	1	17.9	17.2	4%	a
Manganese (Dissolved)	0.002	0.127	0.129	2%	a
Mercury (Dissolved)	0.00015	U	U	---	
Nickel (Dissolved)	0.002	U	U	---	
Potassium (Dissolved)	1	2.35	2.34	0%	b
Selenium (Dissolved)	0.002	U	U	---	
Silver (Dissolved)	0.002	U	U	---	
Sodium (Dissolved)	10	59.6	59.9	1%	a
Thallium (Dissolved)	0.002	U	U	---	
Vanadium (Dissolved)	0.005	U	U	---	
Zinc (Dissolved)	0.005	0.0912	0.0957	5%	a
Alkalinity (as CaCO ₃)	10	135	135	0%	a
Chloride	10	123	122	1%	a
Hardness (as CaCO ₃)	10	325	325	0%	a
Nitrate (as N)	0.01	0.0271	0.0281	4%	b
Phosphate, Total (as P)	0.05	0.05	U	---	
Sulfate	75	130	132	2%	b
Total Dissolved Solids	20	472	532	12%	a
Total Suspended Solids	3	4	3.6	11%	b

a: Sample concentration is greater than five times the PQL

b: Sample concentration is less than five times the PQL

U: Compound was not detected

mg/L: milligrams per liter [All values in mg/L]PQL: Practical Quantitation Limit

*: RPD= | S-D | x 100 / (S+D) / 2 where S: Original Sample; D: Duplicate Sample

RPD: Relative percent difference

Table A5-23: Field Duplicate Sample Results and RPDs for OU3-0-SO-ER-5G-0.501

Analyte	Sample Identification				RPD (%) [*]	Qualifier		
	OU3-0-SO-ER-5G-0.501		OU3-9-SO-ER-5G-0.501					
	1509397-001		1509397-002					
	PQL	Result	PQL	Result				
Aluminum	112	37700	104	39700	5%	a		
Antimony	3.58	57.2	3.32	30.7	60%	J		
Arsenic	2.24	64.8	2.08	52.7	21%	a		
Barium	4.03	377	3.74	319	17%	a		
Beryllium	1.79	U	1.66	U	---			
Cadmium	0.761	7.13	0.706	4.37	48%	J		
Calcium	1120	6750	1040	6870	2%	a		
Chromium	8.95	44.1	8.31	45.3	3%	b		
Cobalt	1.21	13	1.12	11.5	12%	a		
Copper	13.9	118	12.9	92.7	24%	a		
Iron	55.9	27200	51.9	27700	2%	a		
Lead	72.7	1110	67.5	825	29%	a		
Magnesium	1120	6830	1040	7150	5%	a		
Manganese	44.7	995	41.6	693	36%	J		
Mercury	0.0434	0.454	0.0434	0.422	7%	a		
Nickel	17.9	19.5	16.6	20	3%	b		
Phosphate, Total (as P)	54.2	664	55.3	710	7%	a		
Potassium	1120	8360	1040	8810	5%	a		
Selenium	7.61	U	7.06	U	---			
Silver	1.34	9.07	1.25	4.98	58%	b, J		
Sodium	112	890	104	896	1%	a		
Thallium	3.58	U	3.32	U	---			
Vanadium	0.559	54.3	0.519	52.6	3%	b		
Zinc	559	713	519	540	28%	a		

a: Sample concentration is greater than five times the PQL

b: Sample concentration is less than five times the PQL

J: RPD is greater than the control limit

U: Compound was not detected

mg/kg: milligrams per kilogram [All values in mg/kg]

PQL: Practical Quantitation Limit

*: RPD= | S-D | x 100 / (S+D) / 2 where S: Original Sample; D: Duplicate Sample

RPD: Relative percent difference

Table A5-24: Field Duplicate Sample Results and RPDs for OU3-0-SO-ER-9Q-0.501

Analyte	Sample Identification				RPD (%) [*]	Qualifier		
	OU3-0-SO-ER-9Q-0.501		OU3-9-SO-ER-9Q-0.501					
	1509478-001		1509478-002					
	PQL	Result	PQL	Result				
Aluminum	107	29600	103	26700	10%	a		
Antimony	3.44	55	3.29	56.1	2%	a		
Arsenic	2.15	61.1	2.05	56.4	8%	a		
Barium	3.87	332	3.7	244	31%	a		
Beryllium	1.72	U	1.64	U	---			
Cadmium	0.731	6.6	0.699	5.51	18%	a		
Calcium	1070	6470	1030	6040	7%	a		
Chromium	8.6	37.7	8.22	34.1	10%	b		
Cobalt	1.16	13.6	1.11	8.86	42%	J		
Copper	66.6	112	63.7	116	4%	b		
Iron	53.7	25300	51.4	23800	6%	a		
Lead	27.9	1150	26.7	1020	12%	a		
Magnesium	1070	5980	1030	5540	8%	a		
Manganese	17.2	1260	16.4	657	63%	J		
Mercury	0.0404	0.802	0.0437	0.777	3%	a		
Nickel	17.2	U	16.4	U	---			
Phosphate, Total (as P)	54.5	598	49.6	551	8%	a		
Potassium	1070	6320	1030	5670	11%	a		
Selenium	7.31	U	6.99	U	---			
Silver	1.29	8.82	1.23	10.2	15%	a		
Sodium	107	893	103	724	21%	a		
Thallium	3.44	U	3.29	U	---			
Vanadium	0.537	71.5	0.514	57.7	21%	a		
Zinc	215	864	205	846	2%	b		

a: Sample concentration is greater than five times the PQL

b: Sample concentration is less than five times the PQL

J: RPD is greater than the control limit

U: Compound was not detected

mg/kg: milligrams per kilogram [All values in mg/kg]

PQL: Practical Quantitation Limit

*: RPD= | S-D | x 100 / (S+D) / 2 where S: Original Sample; D: Duplicate Sample

RPD: Relative percent difference

Table A5-25: Field Duplicate Sample Results and RPDs for OU3-0-SO-ER-12R-0.501

Analyte	Sample Identification				RPD (%) [*]	Qualifier		
	OU3-0-SO-ER-12R-0.501		OU3-9-SO-ER-12R-0.501					
	1509513-002		1509513-003					
	PQL	Result	PQL	Result				
Aluminum	107	32400	102	33100	2%	a		
Antimony	3.42	6	3.28	6.82	13%	b		
Arsenic	2.14	15.1	2.05	11.9	24%	a		
Barium	38.5	498	3.69	253	65%	J		
Beryllium	1.71	U	1.64	U	---			
Cadmium	0.727	1.73	0.697	1.4	21%	b		
Calcium	1070	6020	1020	5990	0%	a		
Chromium	8.56	36.2	8.2	31.7	13%	b		
Cobalt	1.16	16.2	1.11	8.65	61%	J		
Copper	13.3	23.8	12.7	22.6	5%	b		
Iron	53.5	29100	51.2	28000	4%	a		
Lead	5.56	49.5	5.33	64.4	26%	a		
Magnesium	1070	6310	1020	6280	0%	a		
Manganese	34.2	2390	32.8	651	114%	J		
Mercury	0.0416	0.0603	0.0417	0.0708	16%	b		
Nickel	17.1	29.7	16.4	U	---			
Phosphate, Total (as P)	54	563	54.1	641	13%	a		
Potassium	1070	6530	1020	6870	5%	a		
Selenium	7.27	U	6.97	U	---			
Silver	1.28	U	1.23	U	---			
Sodium	107	749	102	733	2%	a		
Thallium	3.42	U	3.28	U	---			
Vanadium	0.535	61.6	0.512	52	17%	a		
Zinc	42.8	108	41	113	5%	b		

a: Sample concentration is greater than five times the PQL

b: Sample concentration is less than five times the PQL

J: RPD is greater than the control limit

U: Compound was not detected

mg/kg: milligrams per kilogram [All values in mg/kg]

PQL: Practical Quantitation Limit

*: RPD= | S-D | x 100 / (S+D) / 2 where S: Original Sample; D: Duplicate Sample

RPD: Relative percent difference

Table A5-26: Field Duplicate Sample Results and RPDs for OU3-0-SO-ER-3C-0.501

Analyte	Sample Identification				RPD (%) [*]	Qualifier		
	OU3-0-SO-ER-3C-0.501		OU3-9-SO-ER-3C-0.501					
	1509513-022		1509513-023					
	PQL	Result	PQL	Result				
Aluminum	111	31700	106	34100	7%	a		
Antimony	3.56	34.6	3.39	31.7	9%	a		
Arsenic	2.22	39.3	2.12	36.6	7%	a		
Barium	4	271	3.81	276	2%	a		
Beryllium	1.78	U	1.69	U	---			
Cadmium	0.756	5.07	0.72	5.1	1%	a		
Calcium	1110	6020	1060	6020	0%	a		
Chromium	8.89	33.1	8.47	34	3%	b		
Cobalt	1.2	11.4	1.14	9.3	20%	a		
Copper	13.8	84.4	13.1	81.7	3%	a		
Iron	55.6	27800	53	28200	1%	a		
Lead	57.8	687	55.1	568	19%	a		
Magnesium	1110	6420	1060	6490	1%	a		
Manganese	35.6	966	33.9	679	35%	a		
Mercury	0.0423	0.35	0.0414	0.369	5%	a		
Nickel	17.8	18.5	16.9	17.1	8%	b		
Phosphate, Total (as P)	51.9	544	51.7	505	7%	a		
Potassium	1110	6200	1060	6840	10%	a		
Selenium	7.56	U	7.2	U	---			
Silver	1.33	4.92	1.27	4.24	15%	b		
Sodium	111	591	106	560	5%	a		
Thallium	3.56	U	3.39	U	---			
Vanadium	5.56	63.5	5.3	70.3	10%	a		
Zinc	556	677	530	675	0%	b		

a: Sample concentration is greater than five times the PQL

b: Sample concentration is less than five times the PQL

U: Compound was not detected

mg/kg: milligrams per kilogram [All values in mg/kg]

PQL: Practical Quantitation Limit

*: RPD= | S-D | x 100 / (S+D) / 2 where S: Original Sample; D: Duplicate Sample

RPD: Relative percent difference

Table A5-27: Field Duplicate Sample Results and RPDs for OU2-0-SO-29F-0.501

Analyte	Sample Identification				RPD (%) [*]	Qualifier		
	OU2-0-SO-29F-0.501		OU2-9-SO-29F-0.501					
	1509533-004		1509533-005					
	PQL	Result	PQL	Result				
Aluminum	113	47000	110	45400	3%	a		
Antimony	3.67	U	3.67	U	---			
Arsenic	2.29	10.6	2.29	9.93	7%	b		
Barium	4.13	346	4.13	323	7%	a		
Beryllium	1.83	U	1.84	U	---			
Cadmium	0.78	1.09	0.78	1.07	2%	b		
Calcium	1130	6310	1100	6220	1%	a		
Chromium	9.17	43.7	9.18	41.6	5%	b		
Cobalt	1.24	10.5	1.24	9.98	5%	a		
Copper	14.2	19.1	14.2	20.1	5%	b		
Iron	56.4	32400	55	31300	3%	a		
Lead	5.96	19	5.96	17.3	9%	b		
Magnesium	1130	8760	1100	8430	4%	a		
Manganese	45.9	679	45.9	630	7%	a		
Mercury	0.0403	U	0.0418	U	---			
Nickel	18.3	21.3	18.4	20.9	2%	b		
Phosphate, Total (as P)	57.3	432	58.5	466	8%	a		
Potassium	1130	7410	1100	7290	2%	a		
Selenium	7.8	U	7.8	U	---			
Silver	1.38	U	1.38	U	---			
Sodium	113	581	110	607	4%	a		
Thallium	3.67	U	3.67		---			
Vanadium	0.564	64.7	0.55	65.9	2%	a		
Zinc	45.9	82.3	45.9	77.7	6%	b		

a: Sample concentration is greater than five times the PQL

b: Sample concentration is less than five times the PQL

U: Compound was not detected

mg/kg: milligrams per kilogram [All values in mg/kg]

PQL: Practical Quantitation Limit

*: RPD= | S-D | x 100 / (S+D) / 2 where S: Original Sample; D: Duplicate Sample

RPD: Relative percent difference

Table A5-28: Field Duplicate Sample Results and RPDs for OU2-0-SO-260-0.501

Analyte	Sample Identification				RPD (%) [*]	Qualifier		
	OU2-0-SO-260-0.501		OU2-9-SO-260-0.501					
	1509533-021		1509533-022					
	PQL	Result	PQL	Result				
Aluminum	213	17800	225	23200	26%	a		
Antimony	425	1260	450	1740	32%	b		
Arsenic	5.32	709	5.62	1110	44%	J		
Barium	9.57	99.9	10.1	125	22%	a		
Beryllium	4.25	U	4.5	U	---			
Cadmium	1.81	98.3	1.91	129	27%	a		
Calcium	1900	23600	2080	8580	93%	b, J		
Chromium	21.3	72	22.5	98.1	31%	b		
Cobalt	2.87	U	3.04	U	---			
Copper	1650	2120	1740	3040	36%	b		
Iron	106	14900	112	19200	25%	a		
Lead	691	28900	731	41700	36%	J		
Magnesium	2130	8710	2250	11700	29%	b		
Manganese	8.51	469	9	566	19%	a		
Mercury	0.713	40.9	0.801	36.9	10%	a		
Nickel	42.5	U	45	U	---			
Phosphate, Total (as P)	95.9	3150	104	2820	11%	a		
Potassium	1900	4640	2080	4080	13%	b		
Selenium	18.1	U	19.1	21.4	---			
Silver	3.19	181	3.37	256	34%	a		
Sodium	190	307	208	508	49%	b		
Thallium	8.51	U	9	9.35	---			
Vanadium	1.06	40.7	1.12	50.3	21%	a		
Zinc	5320	17700	5620	24800	33%	b		

a: Sample concentration is greater than five times the PQL

b: Sample concentration is less than five times the PQL

J: RPD is greater than the control limit

U: Compound was not detected

mg/kg: milligrams per kilogram [All values in mg/kg]

PQL: Practical Quantitation Limit

*: RPD= | S-D | x 100 / (S+D) / 2 where S: Original Sample; D: Duplicate Sample

RPD: Relative percent difference

Table A5-29: Field Duplicate Sample Results and RPDs for OU2-0-SO-230-0.501

Analyte	Sample Identification				RPD (%) [*]	Qualifier		
	OU2-0-SO-230-0.501		OU2-9-SO-230-0.501					
	1509554-001		1509554-002					
	PQL	Result	PQL	Result				
Aluminum	130	7980	126	7070	12%	a		
Antimony	50.2	577	53.4	578	0%	a		
Arsenic	31.4	558	2.67	470	17%	a		
Barium	4.52	162	4.81	216	29%	a		
Beryllium	2.01	U	2.14	U	---			
Cadmium	0.853	87.3	0.908	92.3	6%	a		
Calcium	1300	40400	1260	44200	9%	a		
Chromium	10	30.6	10.7	59.6	64%	b, J		
Cobalt	1.35	7.09	1.44	6.67	6%	b		
Copper	194	746	207	797	7%	b		
Iron	65	24300	63.2	28100	15%	a		
Lead	815	10300	868	10800	5%	a		
Magnesium	1300	9900	1260	10800	9%	a		
Manganese	50.2	2830	53.4	1920	38%	J		
Mercury	0.474	14.3	0.513	16.7	15%	a		
Nickel	20.1	U	21.4	U	---			
Phosphate, Total (as P)	63.7	1360	65.4	431	104%	J		
Potassium	130	2410	126	2080	15%	a		
Selenium	8.53	11.4	9.08	12.6	10%	b		
Silver	1.51	55.2	1.6	61.1	10%	a		
Sodium	130	486	126	302	47%	b		
Thallium	4.01	5.27	4.27	6.97	28%	b		
Vanadium	0.627	21.1	0.668	24.5	15%	a		
Zinc	6270	17100	6680	17800	4%	b		

a: Sample concentration is greater than five times the PQL

b: Sample concentration is less than five times the PQL

J: RPD is greater than the control limit

U: Compound was not detected

mg/kg: milligrams per kilogram [All values in mg/kg]

PQL: Practical Quantitation Limit

*: RPD= | S-D | x 100 / (S+D) / 2 where S: Original Sample; D: Duplicate Sample

RPD: Relative percent difference

Table A5-30: Field Duplicate Sample Results and RPDs for OU2-0-SO-18H-0.501

Analyte	Sample Identification				RPD (%) [*]	Qualifier		
	OU2-0-SO-18H-0.501		OU2-9-SO-18H-0.501					
	1509599-001		1509599-002					
	PQL	Result	PQL	Result				
Aluminum	103	27700	108	32700	17%	a		
Antimony	3.31	96.6	3.45	94.1	3%	a		
Arsenic	2.07	91.1	2.15	100	9%	a		
Barium	3.72	269	3.88	283	5%	a		
Beryllium	1.65	U	1.72	U	---			
Cadmium	0.703	11.9	0.732	12.5	5%	a		
Calcium	1030	5760	1080	6420	11%	a		
Chromium	8.27	35.7	8.61	40.1	12%	b		
Cobalt	1.12	10.6	1.16	9.86	7%	a		
Copper	12.8	177	13.4	189	7%	a		
Iron	51.7	21300	53.8	25300	17%	a		
Lead	67.2	1810	70	2020	11%	a		
Magnesium	1030	5150	1080	6190	18%	a		
Manganese	41.4	1210	43.1	1160	4%	a		
Mercury	0.0405	1.87	0.0398	1.81	3%	a		
Nickel	16.5	U	17.2	17.4	---			
Phosphate, Total (as P)	51.6	855	52.6	796	7%	a		
Potassium	1100	7800	1130	6540	18%	a		
Selenium	7.03	U	7.32	U	---			
Silver	1.24	13.3	1.29	14.2	7%	a		
Sodium	110	508	113	449	12%	b		
Thallium	3.31	U	3.45	U	---			
Vanadium	0.517	50.7	0.538	60.9	18%	a		
Zinc	517	1510	538	1770	16%	b		

a: Sample concentration is greater than five times the PQL

b: Sample concentration is less than five times the PQL

U: Compound was not detected

mg/kg: milligrams per kilogram [All values in mg/kg]

PQL: Practical Quantitation Limit

*: RPD= | S-D | x 100 / (S+D) / 2 where S: Original Sample; D: Duplicate Sample

RPD: Relative percent difference

Table A5-31: Field Duplicate Sample Results and RPDs for OU2-0-SO-8G-0.501

Analyte	Sample Identification				RPD (%) [*]	Qualifier		
	OU2-0-SO-8G-0.501		OU2-9-SO-8G-0.501					
	1509599-023		1509599-024					
	PQL	Result	PQL	Result				
Aluminum	139	10500	132	11700	11%	a		
Antimony	44.5	1780	42.2	1740	2%	a		
Arsenic	27.8	1320	26.4	1230	7%	a		
Barium	5	248	4.75	309	22%	a		
Beryllium	2.22	U	2.11	U	---			
Cadmium	0.945	156	0.897	162	4%	a		
Calcium	1390	22400	1320	18700	18%	a		
Chromium	11.1	44.2	10.6	50.9	14%	b		
Cobalt	1.5	7.7	1.42	8.53	10%	a		
Copper	172	2680	164	2770	3%	a		
Iron	69.5	28400	66	26100	8%	a		
Lead	722	44400	686	49600	11%	a		
Magnesium	1390	6600	1320	5310	22%	b		
Manganese	44.5	4520	42.2	4530	0%	a		
Mercury	2.74	219	2.83	184	17%	a		
Nickel	22.2	U	21.1	U	---			
Phosphate, Total (as P)	67.3	1980	64.4	2170	9%	a		
Potassium	139	2170	132	2400	10%	a		
Selenium	9.45	12.3	8.97	10.8	13%	b		
Silver	1.67	149	1.58	143	4%	a		
Sodium	139	1340	132	1320	2%	a		
Thallium	4.45	U	4.22	U	---			
Vanadium	0.695	32.9	0.66	36.7	11%	a		
Zinc	5560	44600	5280	41900	6%	a		

a: Sample concentration is greater than five times the PQL

b: Sample concentration is less than five times the PQL

U: Compound was not detected

mg/kg: milligrams per kilogram [All values in mg/kg]

PQL: Practical Quantitation Limit

*: RPD= | S-D | x 100 / (S+D) / 2 where S: Original Sample; D: Duplicate Sample

RPD: Relative percent difference

Table A5-32: Field Duplicate Sample Results and RPDs for OU3-0-SO-NR-14M-0.501

Analyte	Sample Identification				RPD (%) [*]	Qualifier		
	OU3-0-SO-NR-14M-2.2		OU3-9-SO-NR-14M-2.2					
	1509605-003		1509605-004					
	PQL	Result	PQL	Result				
Aluminum	106	17000	112	16500	3%	a		
Antimony	3.4	10.3	3.57	8.18	23%	b		
Arsenic	2.13	12.3	2.23	8.09	41%	b		
Barium	3.83	134	4.01	123	9%	a		
Beryllium	1.7	U	1.78	U	---			
Cadmium	0.723	4.64	0.758	5.06	9%	a		
Calcium	1060	5300	1120	5030	5%	b		
Chromium	8.51	33.5	8.92	35.1	5%	b		
Cobalt	1.15	4.43	1.2	4.5	2%	b		
Copper	13.2	13.5	13.8	U	---			
Iron	53.2	11900	55.8	11400	4%	a		
Lead	6.91	24.8	7.25	21.1	16%	b		
Magnesium	1060	5190	1120	4700	10%	b		
Manganese	3.4	291	3.57	155	61%	J		
Mercury	0.0458	0.207	0.0398	0.188	10%	b		
Nickel	17	U	17.8	U	---			
Phosphate, Total (as P)	57.3	561	53.6	448	22%	a		
Potassium	1060	2530	1120	2980	16%	b		
Selenium	7.23	U	7.58	U	---			
Silver	1.28	U	1.34	U	---			
Sodium	106	466	112	504	8%	b		
Thallium	3.4	U	3.57	U	---			
Vanadium	0.532	30.4	0.558	30.4	0%	a		
Zinc	532	1100	112	846	26%	b		

a: Sample concentration is greater than five times the PQL

b: Sample concentration is less than five times the PQL

J: RPD is greater than the control limit

U: Compound was not detected

mg/kg: milligrams per kilogram [All values in mg/kg]

PQL: Practical Quantitation Limit

*: RPD= | S-D | x 100 / (S+D) / 2 where S: Original Sample; D: Duplicate Sample

RPD: Relative percent difference

Table A5-33: Field Duplicate Sample Results and RPDs for OU3-0-SO-NR-10I-0.501

Analyte	Sample Identification				RPD (%) [*]	Qualifier		
	OU3-0-SO-NR-10I-0.501		OU3-9-SO-NR-10I-0.501					
	1509606-007		1509606-008					
	PQL	Result	PQL	Result				
Aluminum	111	28900	114	31700	9%	a		
Antimony	3.55	8.43	3.66	7.89	7%	b		
Arsenic	2.22	18.5	2.29	17	8%	a		
Barium	3.99	358	4.12	346	3%	a		
Beryllium	1.77	U	1.83	U	---			
Cadmium	0.754	8.8	0.778	9.77	10%	a		
Calcium	1110	7740	1140	8510	9%	a		
Chromium	8.87	42	9.15	38	10%	b		
Cobalt	1.2	9.16	1.24	11.2	20%	a		
Copper	13.7	32.7	14.2	32	2%	b		
Iron	55.4	25400	57.2	24000	6%	a		
Lead	5.76	27.1	5.95	24.1	12%	b		
Magnesium	1110	8880	1140	8310	7%	a		
Manganese	44.3	907	45.8	1200	28%	a		
Mercury	0.0444	0.218	0.0439	0.215	1%	b		
Nickel	17.7	20.5	18.3	20	2%	b		
Phosphate, Total (as P)	57.6	797	56.9	798	0%	a		
Potassium	1110	7490	1140	8050	7%	a		
Selenium	7.54	U	7.78	U	---			
Silver	1.33	U	1.37	U	---			
Sodium	111	890	114	877	1%	a		
Thallium	3.55	U	3.66	U	---			
Vanadium	0.554	41.1	0.572	39.1	5%	a		
Zinc	554	925	572	958	4%	b		

a: Sample concentration is greater than five times the PQL

U: Compound was not detected

mg/kg: milligrams per kilogram [All values in mg/kg]

PQL: Practical Quantitation Limit

*: RPD= | S-D | x 100 / (S+D) / 2 where S: Original Sample; D: Duplicate Sample

RPD: Relative percent difference

Table A5-34: Field Duplicate Sample Results and RPDs for OU2-0-SO-8I-0.501

Analyte	Sample Identification				RPD (%) [*]	Qualifier		
	OU2-0-SO-8I-0.501		OU2-9-SO-8I-0.501					
	1509606-019		1509606-020					
	PQL	Result	PQL	Result				
Aluminum	109	3750	95.4	4460	17%	a		
Antimony	3.48	279	3.05	313	11%	a		
Arsenic	2.17	247	1.91	269	9%	a		
Barium	3.91	30.8	3.44	49.2	46%	J		
Beryllium	1.74	U	1.53	U	---			
Cadmium	0.739	37.1	0.649	65.6	56%	J		
Calcium	1090	37500	954	40700	8%	a		
Chromium	8.7	25.7	7.63	24.4	5%	b		
Cobalt	1.17	1.82	1.03	1.79	2%	b		
Copper	13.5	393	118	393	0%	b		
Iron	54.3	8220	47.7	9390	13%	a		
Lead	565	5350	496	5190	3%	a		
Magnesium	1090	8560	954	10300	18%	a		
Manganese	34.8	1890	30.5	1880	1%	a		
Mercury	0.0407	2.71	0.041	3.08	13%	a		
Nickel	17.4	U	15.3	U	---			
Phosphate, Total (as P)	50.9	1570	46.6	1200	27%	a		
Potassium	1090	1150	954	1450	23%	b		
Selenium	7.39	U	6.49	U	---			
Silver	1.3	46.3	1.15	31	40%	J		
Sodium	109	124	95.4	188	41%	b		
Thallium	3.48	U	3.05	U	---			
Vanadium	0.543	8.79	0.477	8.92	1%	a		
Zinc	4350	11900	3820	8570	33%	b		

a: Sample concentration is greater than five times the PQL

b: Sample concentration is less than five times the PQL

J: RPD is greater than the control limit

U: Compound was not detected

mg/kg: milligrams per kilogram [All values in mg/kg]

PQL: Practical Quantitation Limit

*: RPD= | S-D | x 100 / (S+D) / 2 where S: Original Sample; D: Duplicate Sample

RPD: Relative percent difference

Table A5-35: Field Duplicate Sample Results and RPDs for OU3-0-SO-NR-9G-0.501

Analyte	Sample Identification				RPD (%) [*]	Qualifier		
	OU3-0-SO-NR-9G-0.501		OU3-9-SO-NR-9G-0.501					
	1509604-001		1509604-002					
	PQL	Result	PQL	Result				
Aluminum	139	19800	126	17700	11%	a		
Antimony	4.45	319	4.03	352	10%	a		
Arsenic	34.8	327	31.5	340	4%	a		
Barium	5.01	452	4.54	335	30%	a		
Beryllium	2.23	U	2.02	U	---			
Cadmium	0.947	42.3	0.857	34.4	21%	a		
Calcium	1390	18900	1260	14900	24%	a		
Chromium	13.9	39.2	12.6	35.5	10%	b		
Cobalt	1.88	8.85	1.7	4.4	67%	b, J		
Copper	216	577	195	633	9%	b		
Iron	69.6	20900	63	20900	0%	a		
Lead	905	8550	820	6580	26%	a		
Magnesium	1390	9450	1260	7150	28%	a		
Manganese	55.7	1140	50.4	598	62%	J		
Mercury	0.0573	5.62	0.0523	4.65	19%	a		
Nickel	27.8	U	25.2	U	---			
Phosphate, Total (as P)	67.6	1330	66.6	1810	31%	a		
Potassium	1390	4620	1260	4390	5%	b		
Selenium	9.47	U	8.57	U	---			
Silver	1.67	58.9	1.51	51.8	13%	a		
Sodium	1390	2980	126	647	129%	b		
Thallium	4.45	12.1	4.03	U	---			
Vanadium	0.696	35.1	0.63	37.4	6%	a		
Zinc	6960	9090	6300	7180	23%	b		

a: Sample concentration is greater than five times the PQL

b: Sample concentration is less than five times the PQL

J: RPD is greater than the control limit

U: Compound was not detected

mg/kg: milligrams per kilogram [All values in mg/kg]

PQL: Practical Quantitation Limit

*: RPD= | S-D | x 100 / (S+D) / 2 where S: Original Sample; D: Duplicate Sample

RPD: Relative percent difference

Table A5-36: Field Duplicate Sample Results and RPDs for OU3-0-SO-NR-3F-1.5

Analyte	Sample Identification				RPD (%) [*]	Qualifier		
	OU3-0-SO-NR-3F-1.5		OU3-9-SO-NR-3F-1.5					
	1509604-020		1509604-021					
	PQL	Result	PQL	Result				
Aluminum	114	22500	109	12800	55%	J		
Antimony	3.65	U	3.48	U	---			
Arsenic	2.28	8.67	2.18	6.04	36%	b		
Barium	4.11	257	3.92	227	12%	a		
Beryllium	1.83	U	1.74	U	---			
Cadmium	0.776	1.12	0.74	U	---			
Calcium	1140	5690	1090	3130	58%	b, J		
Chromium	9.13	42.4	8.71	23.6	57%	b, J		
Cobalt	1.23	7.75	1.18	4.46	54%	b, J		
Copper	14.1	U	13.5	U	---			
Iron	57	18400	54.4	9240	66%	J		
Lead	5.93	68.3	5.66	31.8	73%	J		
Magnesium	1140	6450	1090	4890	28%	b		
Manganese	9.13	514	3.48	344	40%	J		
Mercury	0.0425	0.0914	0.0415	0.0823	10%	b		
Nickel	18.3	U	17.4	U	---			
Phosphate, Total (as P)	56.2	588	54.9	530	10%	a		
Potassium	1140	4390	1090	2470	56%	b		
Selenium	7.76	U	7.4	U	---			
Silver	1.37	U	1.31	U	---			
Sodium	114	869	109	361	83%	b, J		
Thallium	3.65	U	3.48	U	---			
Vanadium	0.57	41.9	0.544	23.4	57%	J		
Zinc	45.6	154	43.5	102	41%	b		

a: Sample concentration is greater than five times the PQL

b: Sample concentration is less than five times the PQL

J: RPD is greater than the control limit

U: Compound was not detected

mg/kg: milligrams per kilogram [All values in mg/kg]

PQL: Practical Quantitation Limit

*: RPD= | S-D | x 100 / (S+D) / 2 where S: Original Sample; D: Duplicate Sample

RPD: Relative percent difference

Table A5-37: Field Duplicate Sample Results and RPDs for OU2-0-SO-3B-0.501

Analyte	Sample Identification				RPD (%) [*]	Qualifier		
	OU2-0-SO-3B-0.501		OU2-0-SO-3B-0.501					
	1510030-002		1510030-003					
	PQL	Result	PQL	Result				
Aluminum	113	24700	101	27700	11%	a		
Antimony	3.6	U	3.23	U	---			
Arsenic	2.25	10.9	2.02	10.5	4%	b		
Barium	4.05	236	3.64	348	38%	J		
Beryllium	1.8	U	1.62	U	---			
Cadmium	0.766	0.944	0.687	1.15	20%	b		
Calcium	1130	5040	1010	5510	9%	b		
Chromium	9.01	46.5	8.08	36.2	25%	b		
Cobalt	1.22	13.8	1.09	19.6	35%	a		
Copper	14	23.4	12.5	22.6	3%	b		
Iron	56.3	24900	50.5	25400	2%	a		
Lead	14.6	35.5	32.8	33.6	5%	b		
Magnesium	1130	4630	1010	5120	10%	b		
Manganese	9.01	998	20.2	1760	55%	J		
Mercury	0.0391	0.0544	0.0393	0.12	75%	b		
Nickel	18	24	16.2	25	4%	b		
Phosphate, Total (as P)	52.7	882	51.8	363	83%	J		
Potassium	1130	5230	1010	5720	9%	b		
Selenium	7.66	U	6.87	U	---			
Silver	1.35	U	1.21	U	---			
Sodium	113	429	101	447	4%	b		
Thallium	3.6	U	3.23	U	---			
Vanadium	0.563	58.3	0.505	58.2	0%	a		
Zinc	56.3	92.5	50.5	88.8	4%	b		

a: Sample concentration is greater than five times the PQL

b: Sample concentration is less than five times the PQL

J: RPD is greater than the control limit

U: Compound was not detected

mg/kg: milligrams per kilogram [All values in mg/kg]

PQL: Practical Quantitation Limit

*: RPD= | S-D | x 100 / (S+D) / 2 where S: Original Sample; D: Duplicate Sample

RPD: Relative percent difference

Table A5-38: Field Duplicate Sample Results and RPDs for OU3-0-SO-FT-5E-0.501

Analyte	Sample Identification				RPD (%) [*]	Qualifier		
	OU3-0-SO-FT-5E-0.501		OU3-9-SO-FT-5E-0.501					
	1510031-005		1510031-004					
	PQL	Result	PQL	Result				
Aluminum	107	36500	117	34700	5%	a		
Antimony	3.42	U	3.75	U	---			
Arsenic	2.13	17.5	2.34	15.9	10%	a		
Barium	3.84	259	4.22	239	8%	a		
Beryllium	1.71	U	1.88	U	---			
Cadmium	0.726	1.38	0.797	1.21	13%	b		
Calcium	1070	6230	1170	5980	4%	a		
Chromium	8.54	41.5	9.38	40	4%	b		
Cobalt	1.15	10.7	1.27	10.3	4%	a		
Copper	13.2	35.6	14.5	25.4	33%	b		
Iron	53.4	29800	58.6	26800	11%	a		
Lead	5.55	36.2	6.1	34.6	5%	a		
Magnesium	1070	5940	1170	6630	11%	a		
Manganese	42.7	630	46.9	565	11%	a		
Mercury	0.0392	0.101	0.0412	0.128	24%	b		
Nickel	17.1	20.1	18.8	19.9	1%	b		
Phosphate, Total (as P)	525	1150	539	1440	22%	b		
Potassium	1070	7770	1170	7600	2%	a		
Selenium	7.26	U	7.97	U	---			
Silver	1.28	U	1.41	U	---			
Sodium	107	356	117	371	4%	b		
Thallium	3.42	U	3.75	U	---			
Vanadium	0.534	60.6	0.586	58.8	3%	a		
Zinc	42.7	131	46.9	124	5%	b		

a: Sample concentration is greater than five times the PQL

b: Sample concentration is less than five times the PQL

U: Compound was not detected

mg/kg: milligrams per kilogram [All values in mg/kg]

PQL: Practical Quantitation Limit

*: RPD= | S-D | x 100 / (S+D) / 2 where S: Original Sample; D: Duplicate Sample

RPD: Relative percent difference

Table A5-39: Field Duplicate Sample Results and RPDs for OU3-0-SO-FT-4B-0.501

Analyte	Sample Identification				RPD (%) [*]	Qualifier		
	OU3-0-SO-FT-4B-0.501		OU3-9-SO-FT-4B-0.501					
	1510031-027		1510031-028					
	PQL	Result	PQL	Result				
Aluminum	143	12900	138	14300	10%	a		
Antimony	4.59	267	4.41	278	4%	a		
Arsenic	2.87	226	2.76	279	21%	a		
Barium	258	728	248	871	18%	b		
Beryllium	2.29	U	2.21	U	---			
Cadmium	0.975	66.1	0.938	56.2	16%	a		
Calcium	1430	78400	6890	90700	15%	a		
Chromium	11.9	55.9	11.2	47.1	17%	b		
Cobalt	1.55	5.03	1.49	7.13	35%	b		
Copper	17.8	418	17.1	336	22%	a		
Iron	74.3	27900	69.9	38200	31%	a		
Lead	373	6620	358	6270	5%	a		
Magnesium	1430	34200	1380	36300	6%	a		
Manganese	229	3440	221	3990	15%	a		
Mercury	0.0588	10.6	0.0596	7.7	32%	a		
Nickel	23.8	U	22.4	U	---			
Phosphate, Total (as P)	723	1560	728	1480	5%	b		
Potassium	143	4870	138	5770	17%	a		
Selenium	9.75	12.3	9.38	14.5	16%	b		
Silver	1.72	41.7	1.65	35.7	16%	a		
Sodium	143	462	138	349	28%	b		
Thallium	4.59	25.9	4.41	24	8%	a		
Vanadium	0.717	20.7	0.689	19.9	4%	a		
Zinc	2870	9650	2760	8620	11%	b		

a: Sample concentration is greater than five times the PQL

b: Sample concentration is less than five times the PQL

U: Compound was not detected

mg/kg: milligrams per kilogram [All values in mg/kg]

PQL: Practical Quantitation Limit

*: RPD= | S-D | x 100 / (S+D) / 2 where S: Original Sample; D: Duplicate Sample

RPD: Relative percent difference

Table A5-40: Field Duplicate Sample Results and RPDs for OU3-0-SO-FT-2B-0.501

Analyte	Sample Identification				RPD (%) [*]	Qualifier		
	OU3-0-SO-FT-2B-0.501		OU3-9-SO-FT-2B-0.501					
	1510032-004		1510032-005					
	PQL	Result	PQL	Result				
Aluminum	114	29000	110	35100	19%	a		
Antimony	3.64	3.82	3.52	U	---			
Arsenic	2.28	12.1	2.2	15.1	22%	a		
Barium	4.1	212	3.96	210	1%	a		
Beryllium	1.82	U	1.76	U	---			
Cadmium	0.774	1.95	0.748	1.6	20%	b		
Calcium	1140	9150	1100	10300	12%	a		
Chromium	9.11	37.5	8.8	51.7	32%	b		
Cobalt	1.23	7.23	1.19	7.56	4%	a		
Copper	14.1	30.9	13.6	31	0%	b		
Iron	56.9	19800	55	23300	16%	a		
Lead	5.92	91.5	5.72	69.2	28%	a		
Magnesium	1140	7520	1100	8240	9%	a		
Manganese	3.64	397	3.52	304	27%	a		
Mercury	0.0417	0.25	0.0433	0.209	18%	b		
Nickel	18.2	U	17.6	U	---			
Phosphate, Total (as P)	541	851	531	1170	32%	b		
Potassium	1140	6720	1100	8490	23%	a		
Selenium	7.74	U	7.48	U	---			
Silver	1.37	U	1.32	U	---			
Sodium	114	636	110	707	11%	a		
Thallium	3.64	U	3.52	U	---			
Vanadium	0.569	42.2	0.55	46.8	10%	a		
Zinc	45.5	208	44	190	9%	b		

a: Sample concentration is greater than five times the PQL

b: Sample concentration is less than five times the PQL

U: Compound was not detected

mg/kg: milligrams per kilogram [All values in mg/kg]

PQL: Practical Quantitation Limit

*: RPD= | S-D | x 100 / (S+D) / 2 where S: Original Sample; D: Duplicate Sample

RPD: Relative percent difference

Table A5-41: Field Duplicate Sample Results and RPDs for OU3-0-SO-MRL-16J-0.501

Analyte	Sample Identification				RPD (%) [*]	Qualifier		
	OU3-0-SO-MRL-16J-0.501		OU3-9-SO-MRL-16J-0.501					
	1510032-021		1510032-022					
	PQL	Result	PQL	Result				
Aluminum	113	32200	124	27800	15%	a		
Antimony	3.62	U	3.97	U	---			
Arsenic	2.26	10.9	2.48	19	54%	b, J		
Barium	4.07	287	4.47	258	11%	a		
Beryllium	1.81	U	1.99	U	---			
Cadmium	0.769	0.931	0.844	0.996	7%	b		
Calcium	1130	5070	1240	5050	0%	b		
Chromium	9.05	37.6	9.93	43.5	15%	b		
Cobalt	1.22	10.6	1.34	22	70%	J		
Copper	14	17.2	15.4	U	---			
Iron	56.6	26800	62.1	37300	33%	a		
Lead	5.88	19.6	6.46	30.9	45%	b		
Magnesium	1130	5770	1240	11500	66%	J		
Manganese	72.4	785	79.5	1990	87%	J		
Mercury	0.0466	U	0.0466	U	---			
Nickel	18.1	19.1	19.9	34.7	58%	b		
Phosphate, Total (as P)	52	539	58.2	835	43%	J		
Potassium	1130	5740	124	3960	37%	J		
Selenium	7.69	U	8.44	U	---			
Silver	1.36	U	1.49	U	---			
Sodium	113	317	124	292	8%	b		
Thallium	3.62	U	3.97	U	---			
Vanadium	0.566	58.6	0.621	69.7	17%	a		
Zinc	45.3	77.8	49.7	84.7	8%	b		

a: Sample concentration is greater than five times the PQL

b: Sample concentration is less than five times the PQL

J: RPD is greater than the control limit

U: Compound was not detected

mg/kg: milligrams per kilogram [All values in mg/kg]

PQL: Practical Quantitation Limit

*: RPD= | S-D | x 100 / (S+D) / 2 where S: Original Sample; D: Duplicate Sample

RPD: Relative percent difference

Table A5-42: Field Duplicate Sample Results and RPDs for OU3-0-SO-MRL-16K-0.501

Analyte	Sample Identification				RPD (%)*	Qualifier		
	OU3-0-SO-MRL-16K-0.501		OU3-9-SO-MRL-16K-0.501					
	1510055-002		1510055-003					
	PQL	Result	PQL	Result				
Aluminum	108	32600	120	36000	10%	a		
Antimony	3.47	54	3.84	65	18%	a		
Arsenic	2.17	61.1	2.4	62.6	2%	a		
Barium	3.9	280	4.33	232	19%	a		
Beryllium	1.73	U	1.92	U	---			
Cadmium	0.737	10.9	0.817	11.2	3%	a		
Calcium	1080	11300	1200	12400	9%	a		
Chromium	8.67	35	9.61	38.6	10%	b		
Cobalt	1.17	12.2	1.3	11.3	8%	a		
Copper	13.4	132	14.9	137	4%	a		
Iron	54.2	25300	60.1	27500	8%	a		
Lead	56.4	1380	62.5	1390	1%	a		
Magnesium	1080	7200	1200	7770	8%	a		
Manganese	34.7	1330	38.4	1050	24%	a		
Mercury	0.0441	2.43	0.0389	3.19	27%	a		
Nickel	17.3	19.6	19.2	19.9	2%	b		
Phosphate, Total (as P)	53.1	726	58.4	881	19%	a		
Potassium	1080	6470	1200	7260	12%	a		
Selenium	7.37	U	8.17	U	---			
Silver	1.3	10.7	1.44	11.7	9%	a		
Sodium	108	311	120	390	23%	b		
Thallium	3.47	U	3.84	U	---			
Vanadium	0.542	67.2	0.601	73.9	9%	a		
Zinc	434	2010	481	2060	2%	b		

a: Sample concentration is greater than five times the PQL

b: Sample concentration is less than five times the PQL

U: Compound was not detected

mg/kg: milligrams per kilogram [All values in mg/kg]

PQL: Practical Quantitation Limit

*: RPD= | S-D | x 100 / (S+D) / 2 where S: Original Sample; D: Duplicate Sample

RPD: Relative percent difference

Table A5-43: Field Duplicate Sample Results and RPDs for OU3-0-SO-MRL-15H-0.501

Analyte	Sample Identification				RPD (%) [*]	Qualifier		
	OU3-0-SO-MRL-15H-0.501		OU3-9-SO-MRL-15H-0.501					
	1510055-022		1510055-023					
	PQL	Result	PQL	Result				
Aluminum	112	32800	116	33100	1%	a		
Antimony	3.59	U	3.7	U	---			
Arsenic	2.24	11.5	2.31	11.9	3%	a		
Barium	4.04	292	4.17	298	2%	a		
Beryllium	1.79	U	1.85	U	---			
Cadmium	0.763	1.22	0.787	1.23	1%	b		
Calcium	1120	5230	1160	5160	1%	b		
Chromium	8.97	38.8	9.26	39.1	1%	b		
Cobalt	1.21	11.2	1.25	11.3	1%	a		
Copper	13.9	25.9	14.3	26.5	2%	b		
Iron	56.1	25400	57.9	25700	1%	a		
Lead	5.83	23.6	6.02	23.1	2%	b		
Magnesium	1120	5900	1160	5840	1%	a		
Manganese	35.9	965	37	898	7%	a		
Mercury	0.0445	U	0.0441	U	---			
Nickel	17.9	21.5	18.5	21.6	0%	b		
Phosphate, Total (as P)	55.6	848	55.1	774	9%	a		
Potassium	1120	7610	1160	7820	3%	a		
Selenium	7.63	U	7.87	U	---			
Silver	1.35	U	1.39	U	---			
Sodium	112	332	116	463	33%	b		
Thallium	3.59	U	3.7	U	---			
Vanadium	0.561	62.1	0.579	63.2	2%	a		
Zinc	44.9	108	46.3	108	0%	b		

a: Sample concentration is greater than five times the PQL

b: Sample concentration is less than five times the PQL

U: Compound was not detected

mg/kg: milligrams per kilogram [All values in mg/kg]

PQL: Practical Quantitation Limit

*: RPD= | S-D | x 100 / (S+D) / 2 where S: Original Sample; D: Duplicate Sample

RPD: Relative percent difference

Table A5-44: Field Duplicate Sample Results and RPDs for OU3-0-SO-MRL-16D-0.501

Analyte	Sample Identification				RPD (%)*	Qualifier		
	OU3-0-SO-MRL-16D-0.501		OU3-9-SO-MRL-16D-0.501					
	1510054-002		1510054-003					
	PQL	Result	PQL	Result				
Aluminum	103	21900	109	23000	5%	a		
Antimony	3.28	143	3.5	177	21%	a		
Arsenic	2.05	126	2.19	156	21%	a		
Barium	3.69	208	3.94	238	13%	a		
Beryllium	1.64	U	1.75	U	---			
Cadmium	0.697	41.9	0.744	48.8	15%	a		
Calcium	1030	18800	1090	19400	3%	a		
Chromium	8.2	59.6	8.76	35	52%	b, J		
Cobalt	1.11	10.4	1.18	16	42%	J		
Copper	12.7	262	13.6	292	11%	a		
Iron	51.3	33100	54.7	38400	15%	a		
Lead	66.6	3780	71.2	4090	8%	a		
Magnesium	1030	10300	1090	10400	1%	a		
Manganese	41	1360	43.8	1820	29%	a		
Mercury	0.406	20.2	0.363	37.6	60%	J		
Nickel	16.4	22.8	17.5	17.7	25%	b		
Phosphate, Total (as P)	47.1	1310	52.7	1300	1%	a		
Potassium	1030	5320	1090	5800	9%	a		
Selenium	6.97	U	7.44	7.73	---			
Silver	1.23	25.5	1.31	20.1	24%	a		
Sodium	103	225	109	257	13%	b		
Thallium	3.28	U	3.5	U	---			
Vanadium	0.513	27.7	0.547	32.8	17%	a		
Zinc	5130	6790	5470	8410	21%	b		

a: Sample concentration is greater than five times the PQL

b: Sample concentration is less than five times the PQL

J: RPD is greater than the control limit

U: Compound was not detected

mg/kg: milligrams per kilogram [All values in mg/kg]

PQL: Practical Quantitation Limit

*: RPD= | S-D | x 100 / (S+D) / 2 where S: Original Sample; D: Duplicate Sample

RPD: Relative percent difference

Table A5-45: Field Duplicate Sample Results and RPDs for OU3-0-SO-MRU-7D-0.501

Analyte	Sample Identification				RPD (%) [*]	Qualifier		
	OU3-0-SO-MRU-7D-0.501		OU3-9-SO-MRU-7D-0.501					
	1510053-007		1510053-008					
	PQL	Result	PQL	Result				
Aluminum	111	37800	115	44300	16%	a		
Antimony	3.55	U	3.66	4.1	---			
Arsenic	2.22	10.1	2.29	12.9	24%	b		
Barium	3.99	288	4.12	310	7%	a		
Beryllium	1.77	U	1.83	U	---			
Cadmium	0.754	1.52	0.779	1.53	1%	b		
Calcium	1110	5530	1150	5700	3%	b		
Chromium	8.87	44.5	9.16	48.9	9%	a		
Cobalt	1.2	10.5	1.24	12.8	20%	a		
Copper	13.8	16.9	14.2	20.3	18%	b		
Iron	55.5	29100	57.3	32100	10%	a		
Lead	5.77	86.8	5.95	101	15%	a		
Magnesium	1110	11200	1150	12600	12%	a		
Manganese	71	665	73.3	938	34%	a		
Mercury	0.0412	0.428	0.0404	0.141	101%	b, J		
Nickel	17.7	22.8	18.3	27	17%	b		
Phosphate, Total (as P)	53.5	787	48.7	1000	24%	a		
Potassium	1110	12800	1150	15500	19%	a		
Selenium	7.54	U	7.79	U	---			
Silver	1.33	U	1.37	U	---			
Sodium	111	429	115	507	17%	b		
Thallium	3.55	U	3.66	U	---			
Vanadium	0.555	62.8	0.573	72.6	14%	a		
Zinc	44.4	209	45.8	227	8%	b		

a: Sample concentration is greater than five times the PQL

b: Sample concentration is less than five times the PQL

J: RPD is greater than the control limit

U: Compound was not detected

mg/kg: milligrams per kilogram [All values in mg/kg]

PQL: Practical Quantitation Limit

*: RPD= | S-D | x 100 / (S+D) / 2 where S: Original Sample; D: Duplicate Sample

RPD: Relative percent difference

Table A5-46: Field Duplicate Sample Results and RPDs for OU2-0-GW-P2-5

Analyte	PQL	Sample Identification		RPD (%)*	Qualifier
		OU2-0-GW-P2-5	OU2-0-GW-P2-5		
		1510120-001	1510120-002		
Aluminum (Total)	0.1	0.106	0.127	18%	b
Antimony (Total)	0.002	0.494	0.474	4%	a
Arsenic (Total)	0.002	0.397	0.373	6%	a
Barium (Total)	0.002	0.102	0.0986	3%	a
Beryllium (Total)	0.002	U	U	---	
Cadmium (Total)	0.0005	0.00269	0.00298	10%	a
Calcium (Total)	10	51.8	53.7	4%	a
Chromium (Total)	0.002	U	U	---	
Cobalt (Total)	0.004	U	U	---	
Copper (Total)	0.002	0.053	0.0563	6%	a
Iron (Total)	0.1	6.71	6.76	1%	a
Lead (Total)	0.002	0.726	0.812	11%	a
Magnesium (Total)	1	10.4	10.3	1%	a
Manganese (Total)	0.002	1.4	1.34	4%	a
Mercury (Total)	0.00015	0.00107	0.00146	31%	a
Nickel (Total)	0.002	0.00237	0.00226	5%	b
Potassium (Total)	1	2.67	2.65	1%	b
Selenium (Total)	0.002	U	U	---	
Silver (Total)	0.002	0.00279	0.00292	5%	b
Sodium (Total)	1	16.2	15.9	2%	a
Thallium (Total)	0.002	U	U	---	
Vanadium (Total)	0.005	U	U	---	
Zinc (Total)	0.025	3.05	3.14	3%	a
Aluminum (Dissolved)	0.1	U	U	---	
Antimony (Dissolved)	0.002	0.469	0.468	0%	a
Arsenic (Dissolved)	0.002	0.365	0.36	1%	a
Barium (Dissolved)	0.002	0.0986	0.0978	1%	a
Beryllium (Dissolved)	0.002	U	U	---	
Cadmium (Dissolved)	0.0005	U	U	---	
Calcium (Dissolved)	10	51.4	52.5	2%	a
Chromium (Dissolved)	0.002	U	U	---	
Cobalt (Dissolved)	0.004	U	U	---	
Copper (Dissolved)	0.002	U	U	---	
Iron (Dissolved)	0.1	6.45	6.41	1%	a
Lead (Dissolved)	0.002	0.0383	0.0379	1%	a
Magnesium (Dissolved)	1	10.4	10.3	1%	a
Manganese (Dissolved)	0.002	1.31	1.31	0%	a
Mercury (Dissolved)	0.00015	U	U	---	
Nickel (Dissolved)	0.002	0.0021	0.00223	6%	b
Potassium (Dissolved)	1	2.65	2.68	1%	b
Selenium (Dissolved)	0.002	U	U	---	
Silver (Dissolved)	0.002	U	U	---	
Sodium (Dissolved)	1	16	16	0%	a
Thallium (Dissolved)	0.002	U	U	---	
Vanadium (Dissolved)	0.005	U	U	---	
Zinc (Dissolved)	0.025	2.55	2.55	0%	a
Alkalinity (as CaCO ₃)	10	172	174	1%	a
Chloride	1	24.9	25.2	1%	a
Hardness (as CaCO ₃)	10	172	177	3%	a
Nitrate (as N)	0.01	U	U	---	
Phosphate, Total (as P)	0.05	0.219	0.207	6%	b
Sulfate	7.5	16.9	17	1%	b
Total Dissolved Solids	20	220	248	12%	a
Total Suspended Solids	3	19	18.4	3%	a

a: Sample concentration is greater than five times the PQL

b: Sample concentration is less than five times the PQL

U: Compound was not detected

mg/L: milligrams per liter [All values in mg/L]

PQL: Practical Quantitation Limit

*: RPD= | S-D | x 100 / (S+D) / 2 where S: Original Sample; D: Duplicate Sample

RPD: Relative percent difference

Table A5-47: Field Duplicate Sample Results and RPDs for OU3-0-GW-T1E0125

Analyte	PQL	Sample Identification		RPD (%)*	Qualifier
		OU3-0-GW-T1E0125	OU3-9-GW-T1E0125		
		1510154-002	1510154-003		
Aluminum (Total)	0.1	U	U	---	
Antimony (Total)	0.002	0.00206	U	---	
Arsenic (Total)	0.002	0.0151	0.0152	1%	a
Barium (Total)	0.002	0.105	0.102	3%	a
Beryllium (Total)	0.002	U	U	---	
Cadmium (Total)	0.0005	0.00113	0.00115	2%	b
Calcium (Total)	10	249	243	2%	a
Chromium (Total)	0.002	U	U	---	
Cobalt (Total)	0.004	0.00601	0.00595	1%	b
Copper (Total)	0.002	U	U	---	
Iron (Total)	0.1	0.499	0.481	4%	b
Lead (Total)	0.002	U	U	---	
Magnesium (Total)	10	57.6	56.7	2%	a
Manganese (Total)	0.02	4.4	4.31	2%	a
Mercury (Total)	0.00015	U	U	---	
Nickel (Total)	0.002	0.00263	0.0027	3%	b
Potassium (Total)	1	2.9	2.87	1%	b
Selenium (Total)	0.002	U	U	---	
Silver (Total)	0.002	U	U	---	
Sodium (Total)	10	279	280	0%	a
Thallium (Total)	0.002	U	U	---	
Vanadium (Total)	0.005	U	U	---	
Zinc (Total)	0.005	0.0878	0.143	48%	J
Aluminum (Dissolved)	0.1	U	U	---	
Antimony (Dissolved)	0.002	U	U	---	
Arsenic (Dissolved)	0.002	0.015	0.0152	1%	a
Barium (Dissolved)	0.002	0.102	0.102	0%	a
Beryllium (Dissolved)	0.002	U	U	---	
Cadmium (Dissolved)	0.0005	U	U	---	
Calcium (Dissolved)	10	239	242	1%	a
Chromium (Dissolved)	0.002	U	U	---	
Cobalt (Dissolved)	0.004	0.00566	0.00588	4%	b
Copper (Dissolved)	0.002	U	U	---	
Iron (Dissolved)	0.1	0.449	0.455	1%	b
Lead (Dissolved)	0.002	U	U	---	
Magnesium (Dissolved)	10	54.6	56.3	3%	a
Manganese (Dissolved)	0.01	4.18	4.19	0%	a
Mercury (Dissolved)	0.00015	U	U	---	
Nickel (Dissolved)	0.002	0.00253	0.00245	3%	b
Potassium (Dissolved)	1	2.81	2.83	1%	b
Selenium (Dissolved)	0.002	U	U	---	
Silver (Dissolved)	0.002	U	U	---	
Sodium (Dissolved)	10	261	263	1%	a
Thallium (Dissolved)	0.002	U	U	---	
Vanadium (Dissolved)	0.005	U	U	---	
Zinc (Dissolved)	0.005	0.0982	0.0948	4%	a
Alkalinity (as CaCO ₃)	10	267	267	0%	a
Chloride	10	741	728	2%	a
Hardness (as CaCO ₃)	10	859	840	2%	a
Nitrate (as N)	0.01	U	U	---	
Phosphate, Total (as P)	0.05	0.0546	0.0542	1%	b
Sulfate	75	132	131	1%	b
Total Dissolved Solids	20	1680	1770	5%	a
Total Suspended Solids	3	U	U	---	

a: Sample concentration is greater than five times the PQL

b: Sample concentration is less than five times the PQL

J: RPD is greater than the control limit

U: Compound was not detected

mg/L: milligrams per liter [All values in mg/L]PQL: Practical Quantitation Limit

*: RPD= | S-D | x 100 / (S+D) / 2 where S: Original Sample; D: Duplicate Sample

RPD: Relative percent difference

Table A5-48: Field Duplicate Sample Results and RPDs for OU2-0-SW-SCI80

Analyte	PQL	Sample Identification		RPD (%)*	Qualifier
		OU2-0-SW-SCI80	OU2-9-SW-SCI80		
		1510190-001	1510190-002		
Aluminum (Total)	0.1	U	U	---	
Antimony (Total)	0.002	0.0203	0.0199	2%	a
Arsenic (Total)	0.002	0.0251	0.0249	1%	a
Barium (Total)	0.002	0.0781	0.0769	2%	a
Beryllium (Total)	0.002	U	U	---	
Cadmium (Total)	0.0005	0.00103	0.00102	1%	b
Calcium (Total)	10	134	133	1%	a
Chromium (Total)	0.002	U	U	---	
Cobalt (Total)	0.004	U	U	---	
Copper (Total)	0.002	0.00798	0.0079	1%	b
Iron (Total)	0.1	0.304	0.297	2%	b
Lead (Total)	0.002	0.0552	0.0551	0%	a
Magnesium (Total)	1	31.8	31.3	2%	a
Manganese (Total)	0.002	0.299	0.298	0%	a
Mercury (Total)	0.00015	U	U	---	
Nickel (Total)	0.002	U	U	---	
Potassium (Total)	1	9.26	9.27	0%	a
Selenium (Total)	0.002	U	U	---	
Silver (Total)	0.002	U	U	---	
Sodium (Total)	10	122	119	2%	a
Thallium (Total)	0.002	U	U	---	
Vanadium (Total)	0.005	U	U	---	
Zinc (Total)	0.005	0.583	0.579	1%	a
Aluminum (Dissolved)	0.1	U	U	---	
Antimony (Dissolved)	0.002	0.0197	0.0196	1%	a
Arsenic (Dissolved)	0.002	0.0222	0.0218	2%	a
Barium (Dissolved)	0.002	0.0773	0.0768	1%	a
Beryllium (Dissolved)	0.002	U	U	---	
Cadmium (Dissolved)	0.0005	0.000681	0.000696	2%	b
Calcium (Dissolved)	10	131	133	2%	a
Chromium (Dissolved)	0.002	U	U	---	
Cobalt (Dissolved)	0.004	U	U	---	
Copper (Dissolved)	0.002	0.0055	0.00547	1%	b
Iron (Dissolved)	0.1	0.121	0.116	4%	b
Lead (Dissolved)	0.002	0.0157	0.0155	1%	a
Magnesium (Dissolved)	1	32.1	31.7	1%	a
Manganese (Dissolved)	0.002	0.297	0.299	1%	a
Mercury (Dissolved)	0.00015	U	U	---	
Nickel (Dissolved)	0.002	U	U	---	
Potassium (Dissolved)	1	9.43	9.38	1%	a
Selenium (Dissolved)	0.002	U	U	---	
Silver (Dissolved)	0.002	U	U	---	
Sodium (Dissolved)	10	120	121	1%	a
Thallium (Dissolved)	0.002	U	U	---	
Vanadium (Dissolved)	0.005	U	U	---	
Zinc (Dissolved)	0.005	0.513	0.512	0%	a
Alkalinity (as CaCO ₃)	10	178	181	2%	a
Chloride	10	223	221	1%	a
Hardness (as CaCO ₃)	10	465	460	1%	a
Nitrate (as N)	0.1	7.06	6.63	6%	a
Phosphate, Total (as P)	0.05	0.534	0.545	2%	a
Sulfate	75	188	187	1%	b
Total Dissolved Solids	20	864	856	1%	a
Total Suspended Solids	3	U	3.2	---	

a: Sample concentration is greater than five times the PQL

b: Sample concentration is less than five times the PQL

U: Compound was not detected

mg/L: milligrams per liter [All values in mg/L]PQL: Practical Quantitation Limit

*: RPD= | S-D | x 100 / (S+D) / 2 where S: Original Sample; D: Duplicate Sample

RPD: Relative percent difference

Table A5-49: Field Duplicate Sample Results and RPDs for OU3-0-SW-SC248BC

Analyte	PQL	Sample Identification		RPD (%)*	Qualifier
		OU3-0-SW-SC248BC	OU3-9-SW-SC248BC		
		1510204-001	1510204-002		
Aluminum (Total)	0.1	U	U	---	
Antimony (Total)	0.002	0.00612	0.00659	7%	b
Arsenic (Total)	0.002	0.00842	0.00848	1%	b
Barium (Total)	0.002	0.046	0.0456	1%	a
Beryllium (Total)	0.002	U	U	---	
Cadmium (Total)	0.0005	0.000614	0.000631	3%	b
Calcium (Total)	10	123	125	2%	a
Chromium (Total)	0.002	U	U	---	
Cobalt (Total)	0.004	U	U	---	
Copper (Total)	0.002	0.00273	0.00293	7%	b
Iron (Total)	0.1	0.407	0.402	1%	b
Lead (Total)	0.002	0.038	0.0372	2%	a
Magnesium (Total)	1	28.7	27.8	3%	a
Manganese (Total)	0.002	0.4	0.403	1%	a
Mercury (Total)	0.00015	U	U	---	
Nickel (Total)	0.002	U	U	---	
Potassium (Total)	1	2.28	2.25	1%	b
Selenium (Total)	0.002	U	U	---	
Silver (Total)	0.002	U	U	---	
Sodium (Total)	10	53.5	54.4	2%	a
Thallium (Total)	0.002	U	U	---	
Vanadium (Total)	0.005	U	U	---	
Zinc (Total)	0.005	0.211	0.212	0%	a
Aluminum (Dissolved)	0.1	U	U	---	
Antimony (Dissolved)	0.002	0.00588	0.00601	2%	b
Arsenic (Dissolved)	0.002	0.00572	0.00575	1%	b
Barium (Dissolved)	0.002	0.0454	0.0466	3%	a
Beryllium (Dissolved)	0.002	U	U	---	
Cadmium (Dissolved)	0.0005	U	U	---	
Calcium (Dissolved)	10	128	131	2%	a
Chromium (Dissolved)	0.002	U	U	---	
Cobalt (Dissolved)	0.004	U	U	---	
Copper (Dissolved)	0.002	U	U	---	
Iron (Dissolved)	0.1	U	U	---	
Lead (Dissolved)	0.002	0.00437	0.0045	3%	b
Magnesium (Dissolved)	10	31.3	29.2	7%	b
Manganese (Dissolved)	0.002	0.411	0.409	0%	a
Mercury (Dissolved)	0.00015	U	U	---	
Nickel (Dissolved)	0.002	U	U	---	
Potassium (Dissolved)	1	2.32	2.31	0%	b
Selenium (Dissolved)	0.002	U	U	---	
Silver (Dissolved)	0.002	U	U	---	
Sodium (Dissolved)	10	57.2	57.4	0%	a
Thallium (Dissolved)	0.002	U	U	---	
Vanadium (Dissolved)	0.005	U	U	---	
Zinc (Dissolved)	0.005	0.169	0.174	3%	a
Alkalinity (as CaCO ₃)	10	161	161	0%	a
Chloride	10	106	104	2%	a
Hardness (as CaCO ₃)	10	425	428	1%	a
Nitrate (as N)	0.01	U	U	---	
Phosphate, Total (as P)	0.05	U	U	---	
Sulfate	75	232	231	0%	b
Total Dissolved Solids	20	636	700	10%	a
Total Suspended Solids	3	U	U	---	

a: Sample concentration is greater than five times the PQL

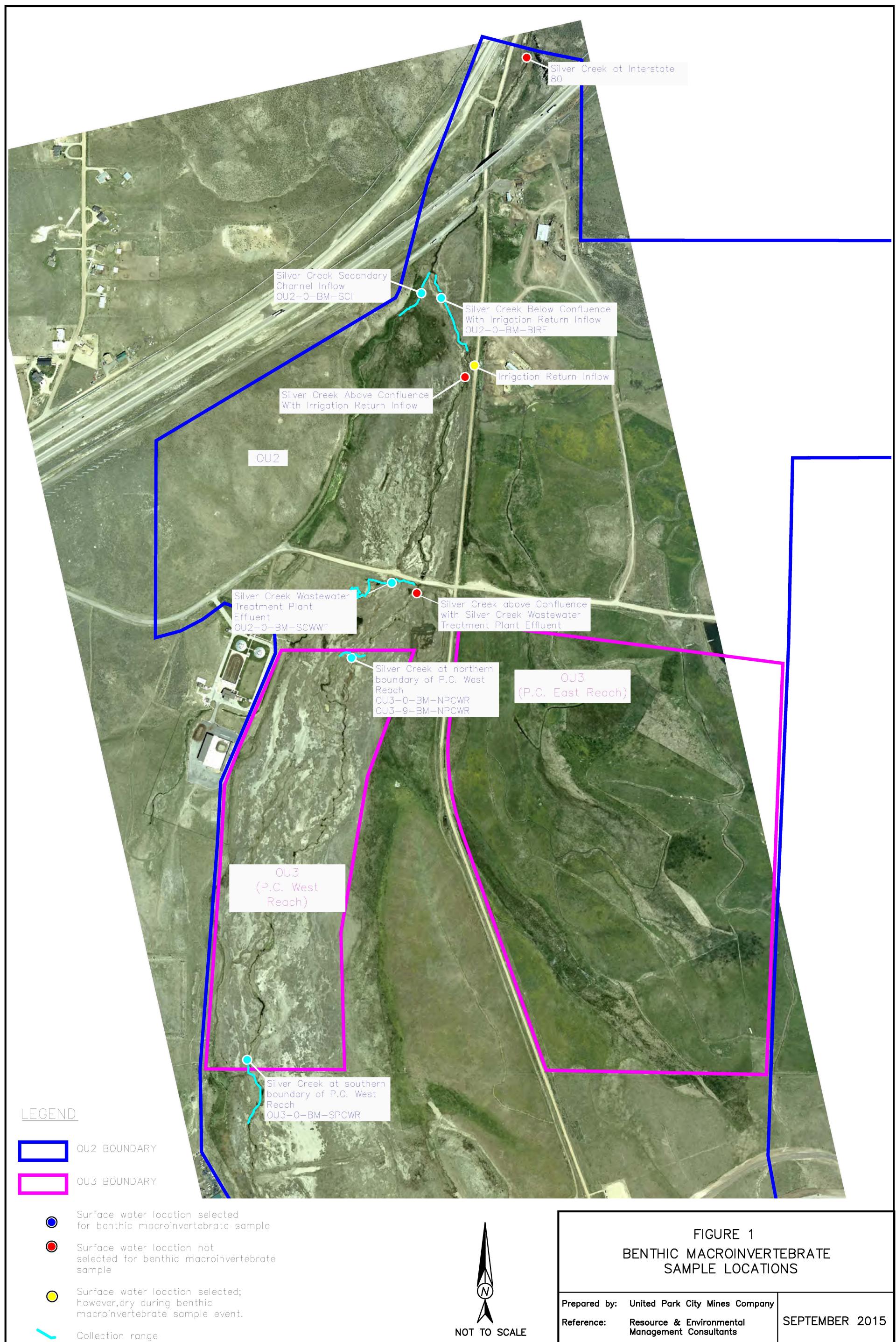
b: Sample concentration is less than five times the PQL

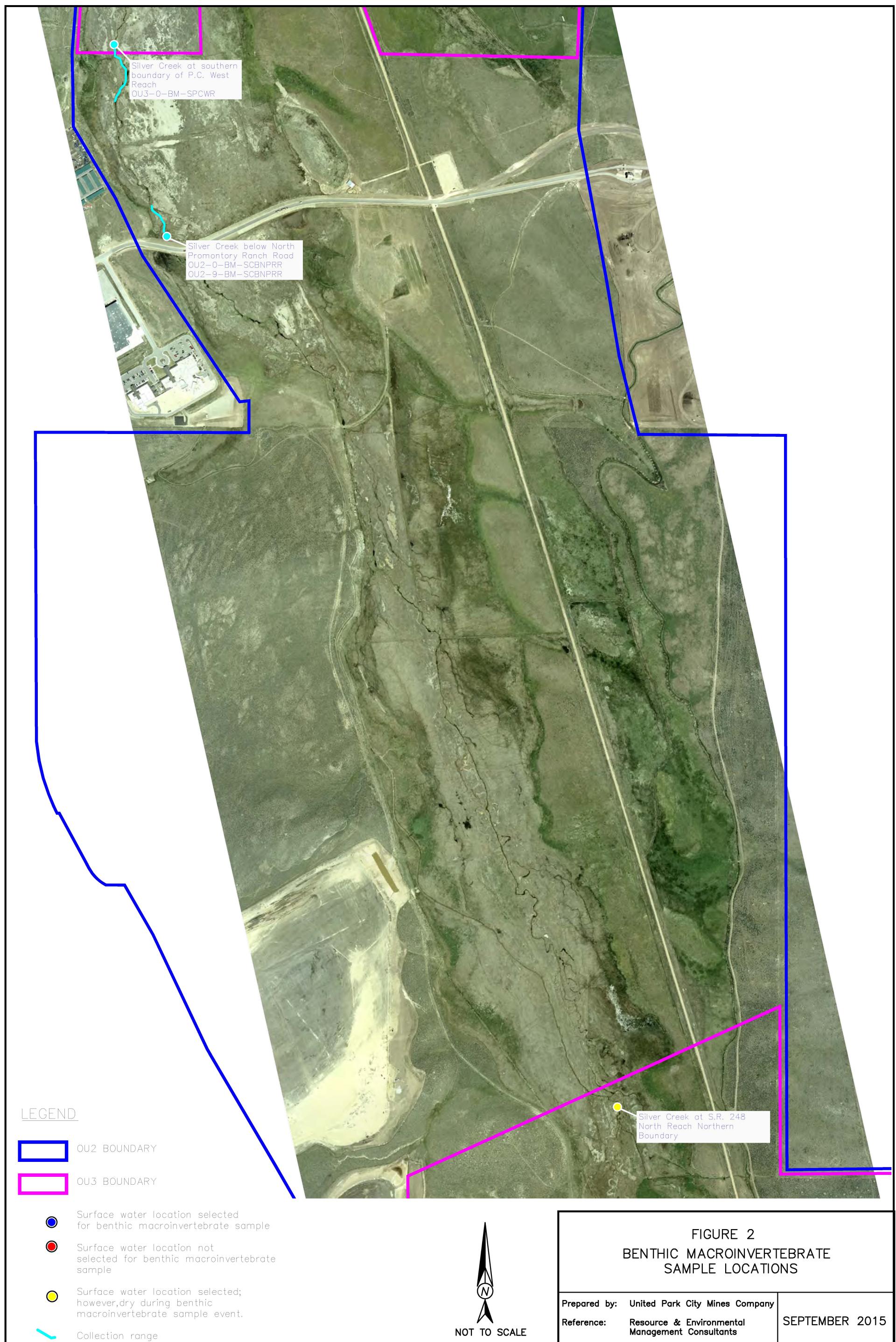
U: Compound was not detected

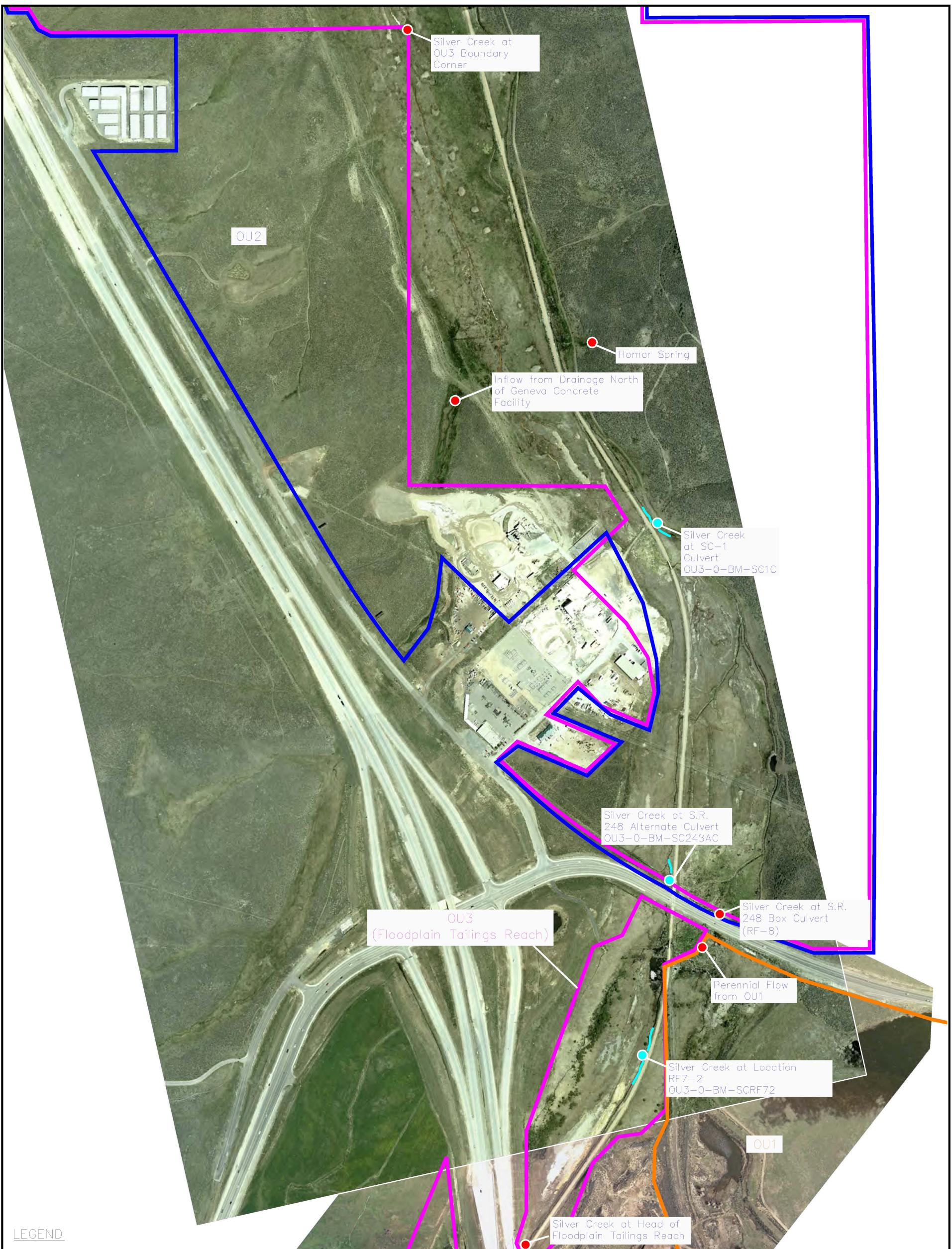
mg/L: milligrams per liter [All values in mg/L]PQL: Practical Quantitation Limit

*: RPD= | S-D | x 100 / (S+D) / 2 where S: Original Sample; D: Duplicate Sample

RPD: Relative percent difference







LEGEND

 OU1 BOUNDARY

 OU2 BOUNDARY

 OU3 BOUNDARY

● Surface water location selected for benthic macroinvertebrate sample

● Surface water location not selected for benthic macroinvertebrate sample

— Collection range

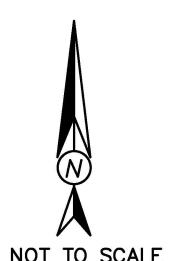


FIGURE 3
BENTHIC MACROINVERTEBRATE
SAMPLE LOCATIONS

Prepared by: United Park City Mines Company
Reference: Resource & Environmental Management Consultants

SEPTEMBER 2015

LEGEND

 OU1 BOUNDARY

 OU3 BOUNDARY

 Surface water location selected for benthic macroinvertebrate sample

 Surface water location not selected for benthic macroinvertebrate sample

 Collection range

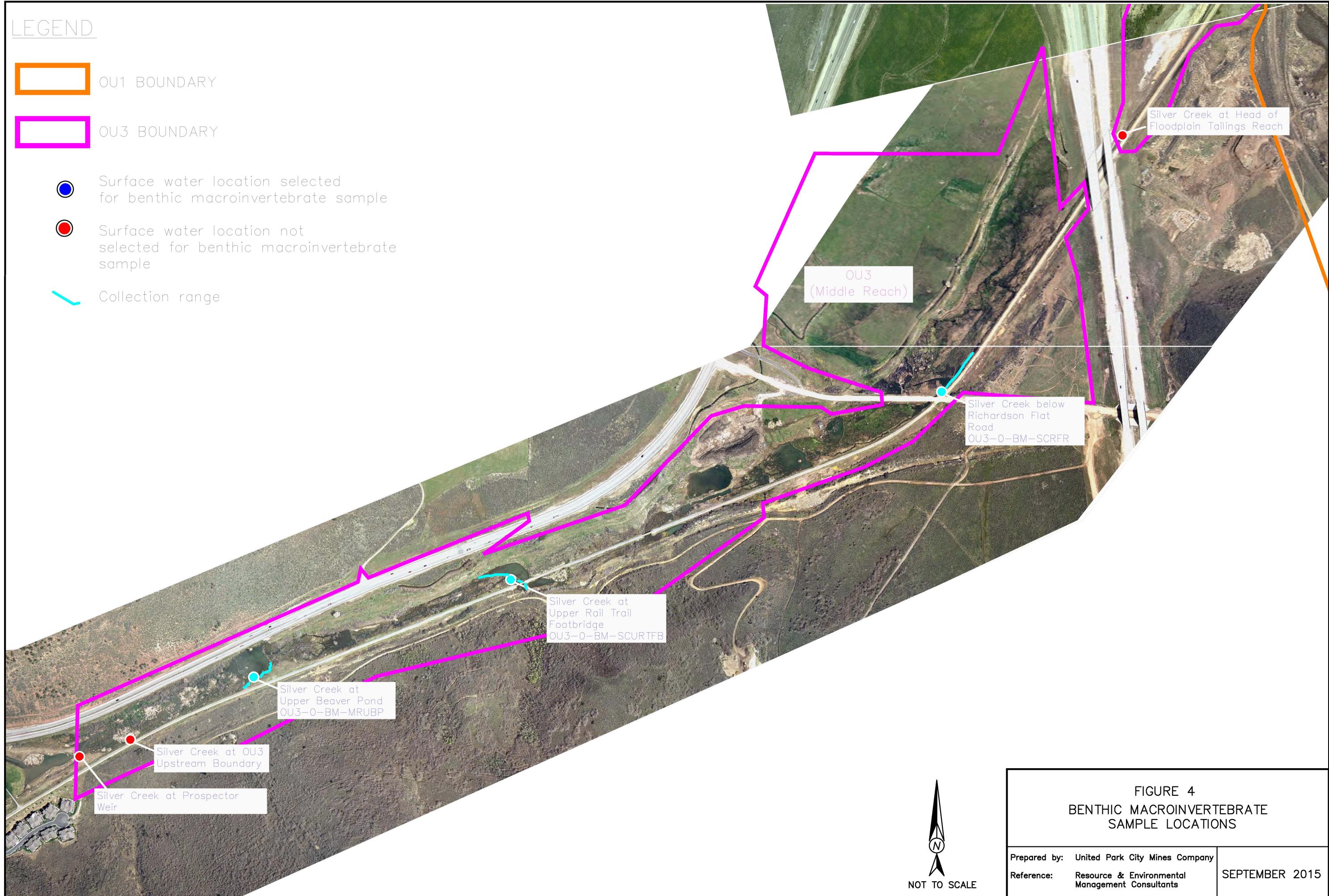


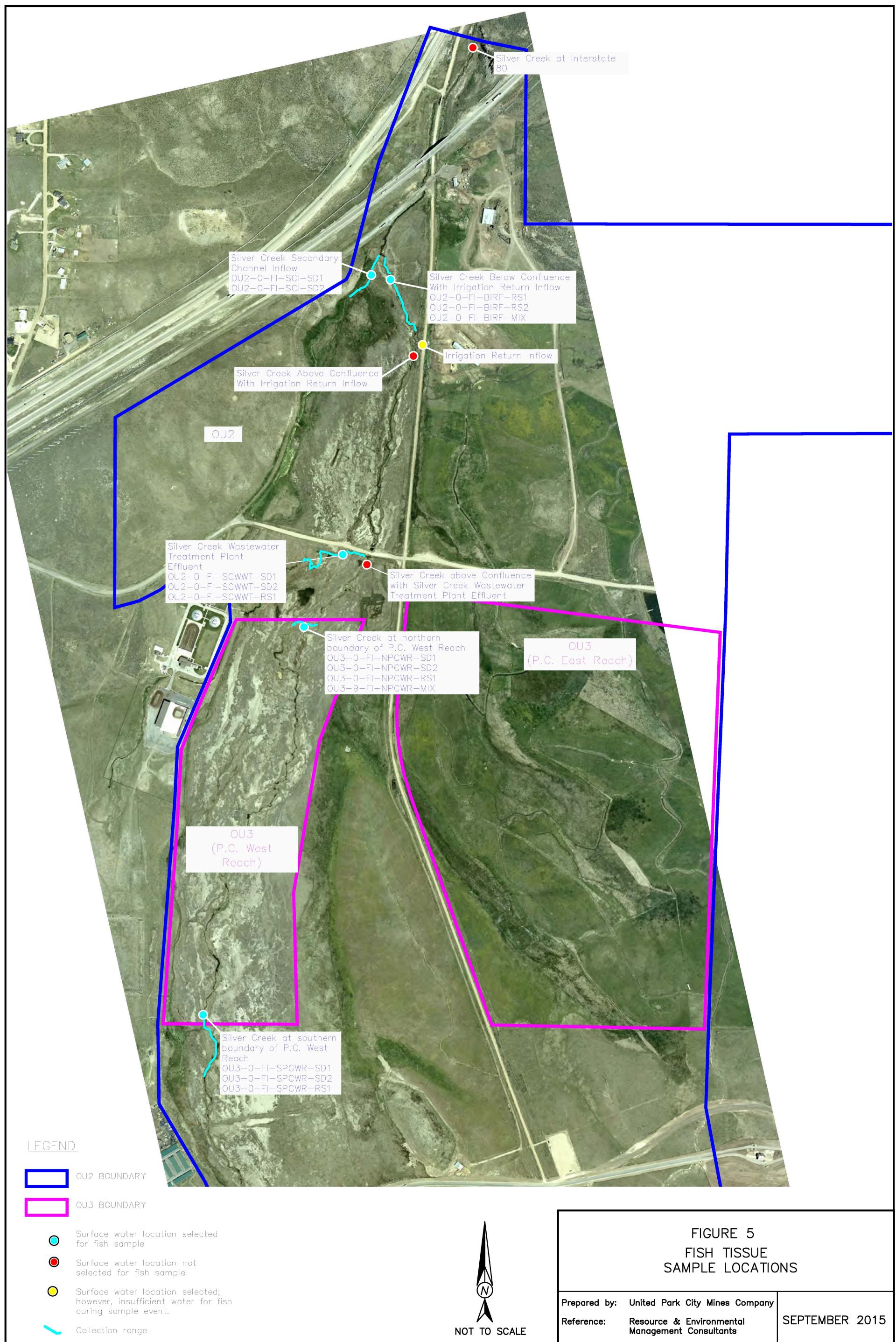
FIGURE 4
BENTHIC MACROINVERTEBRATE
SAMPLE LOCATIONS

Prepared by: United Park City Mines Company

Reference: Resource & Environmental Management Consultants

SEPTEMBER 2015

 NOT TO SCALE



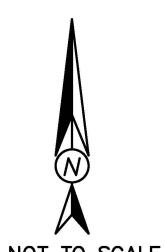
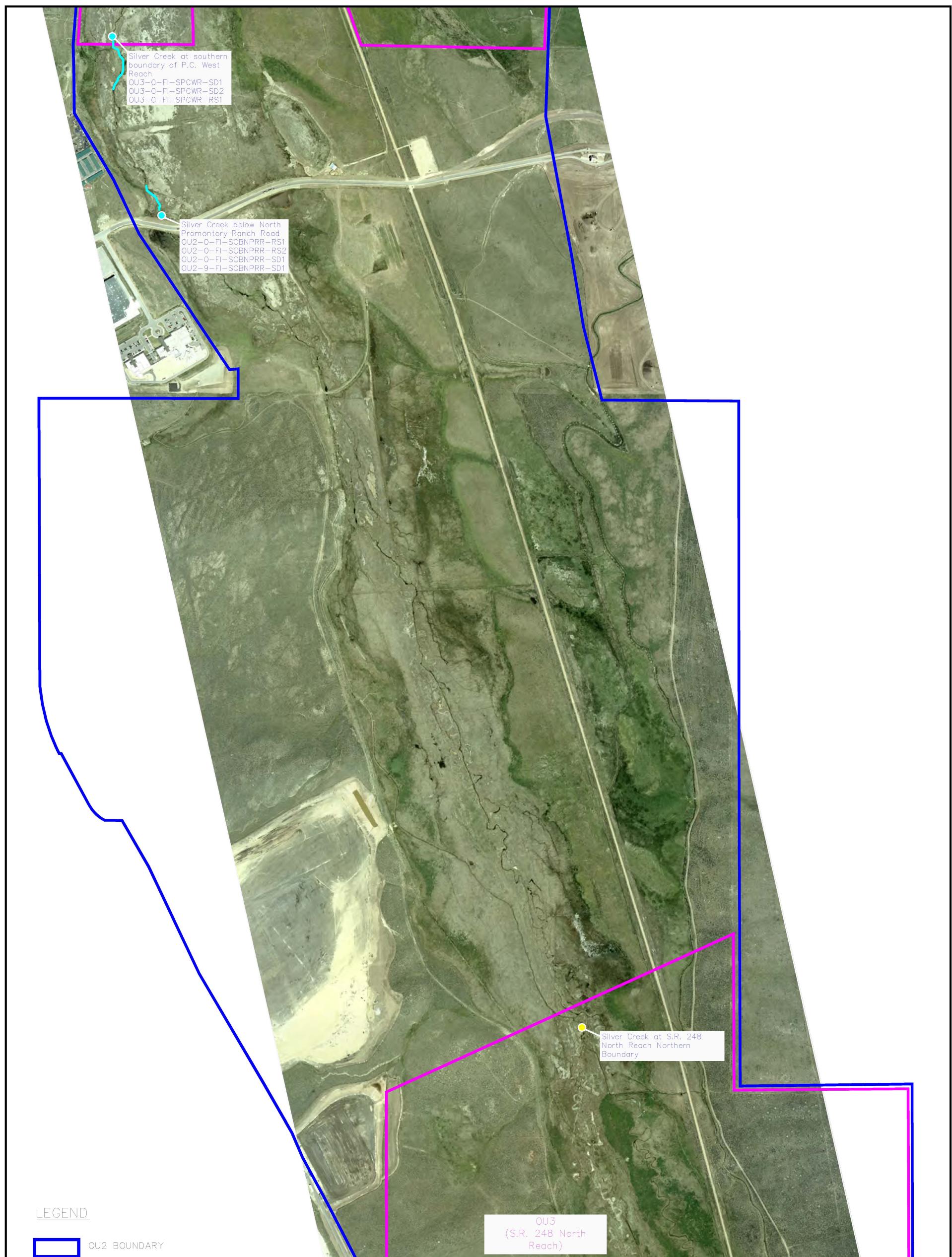
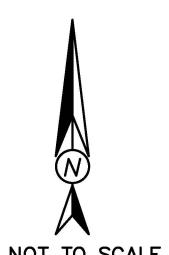
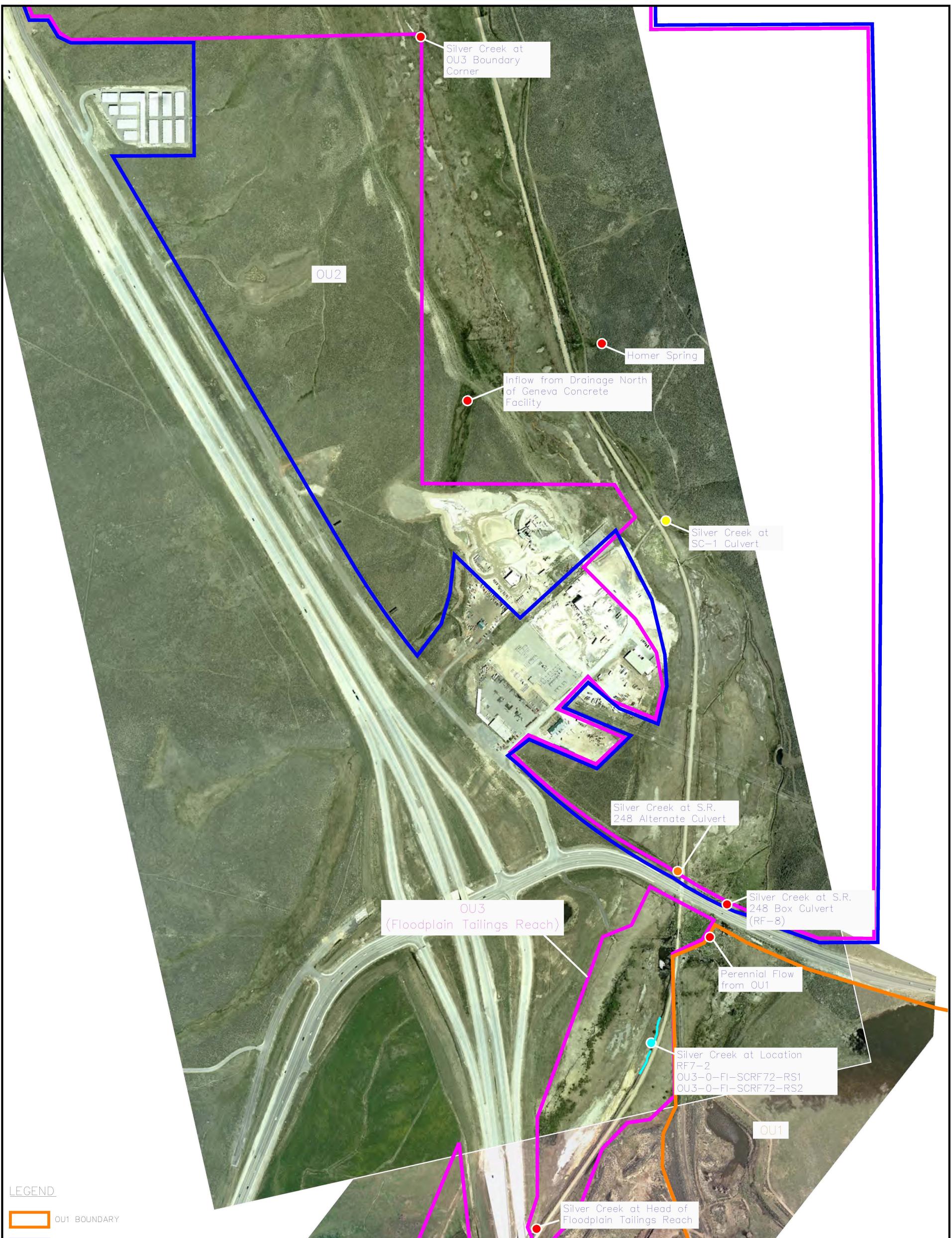


FIGURE 6
FISH TISSUE
SAMPLE LOCATIONS

Prepared by: United Park City Mines Company
Reference: Resource & Environmental Management Consultants

SEPTEMBER 2015

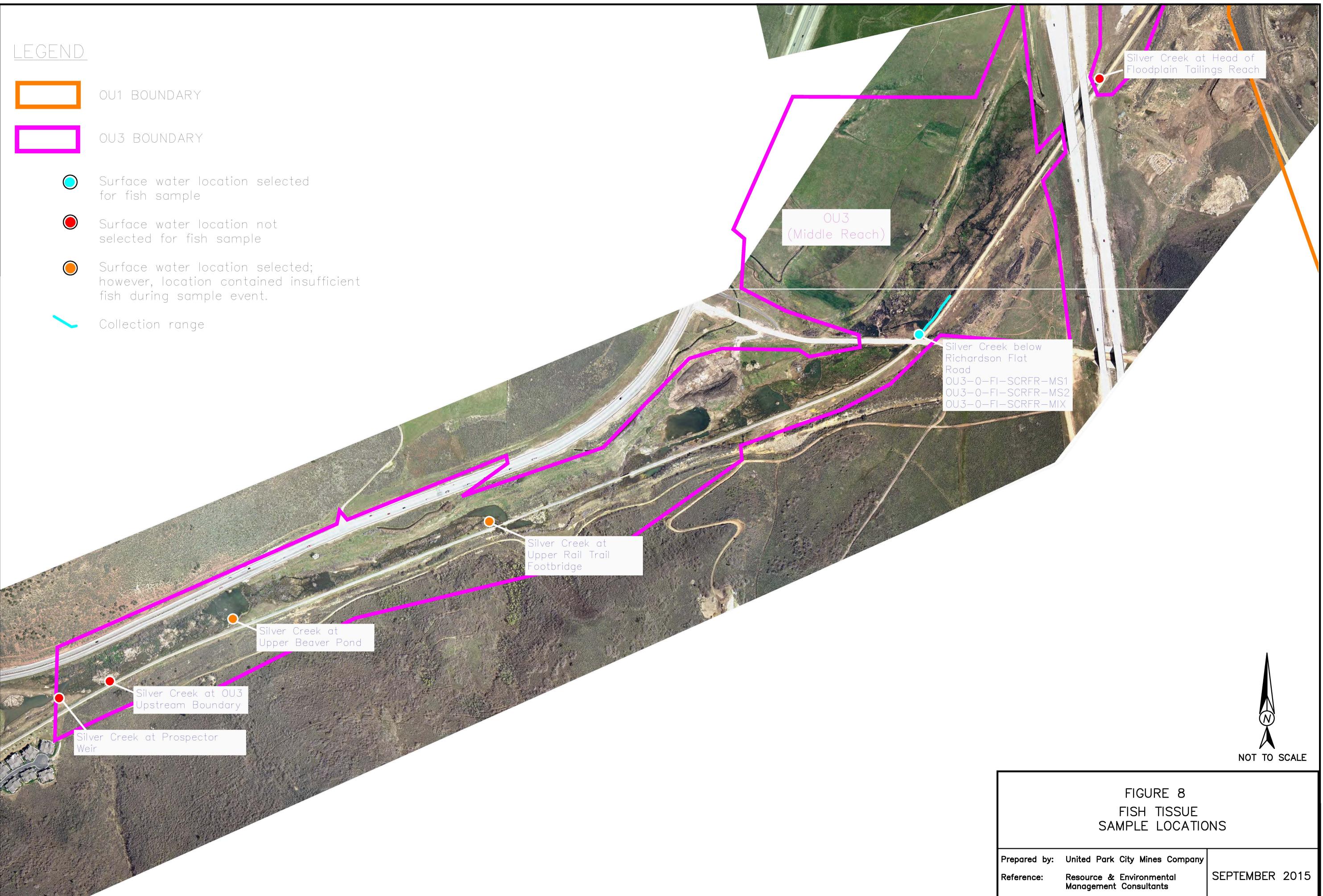


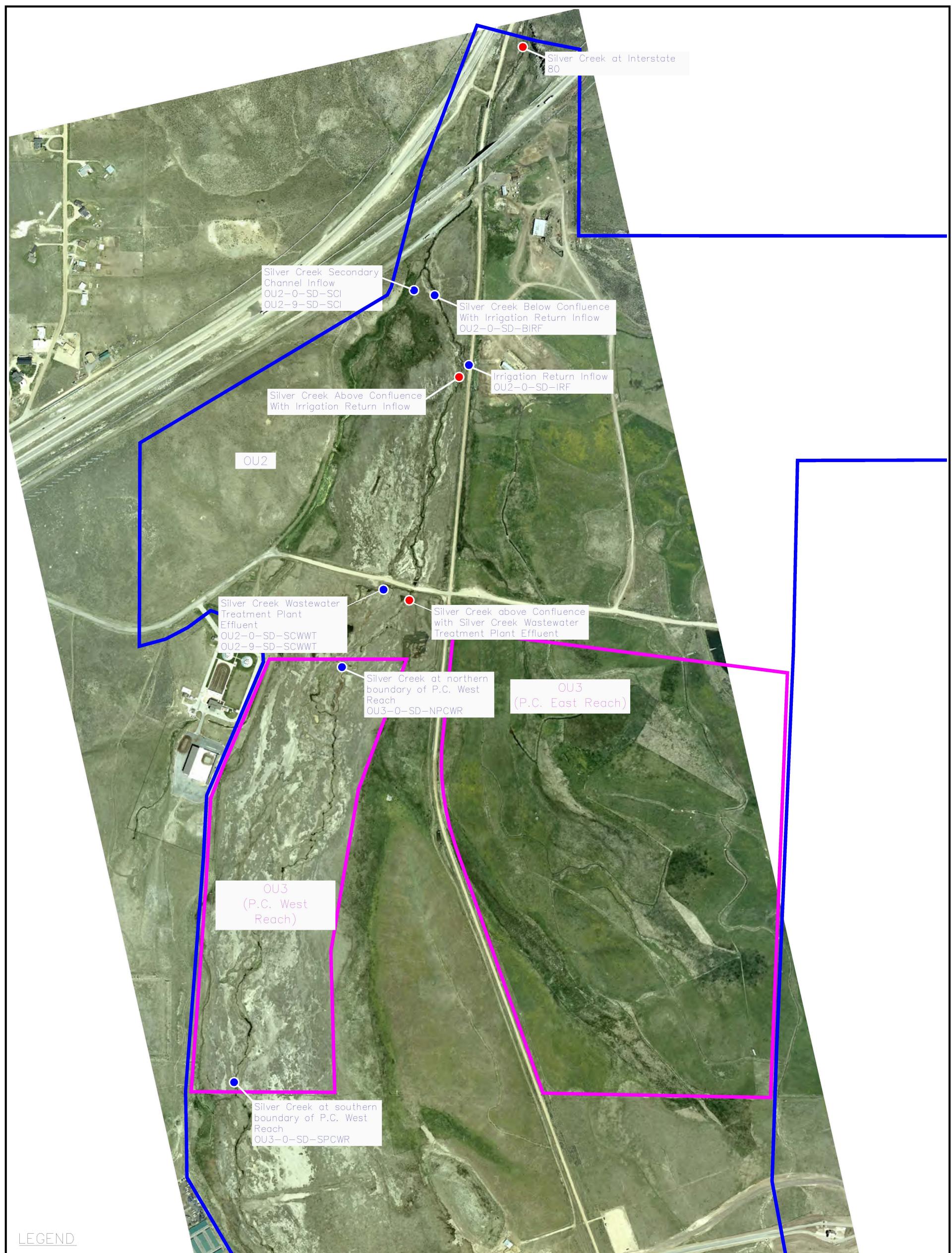
NOT TO SCALE

FIGURE 7
FISH TISSUE
SAMPLE LOCATIONS

Prepared by: United Park City Mines Company
Reference: Resource & Environmental Management Consultants

SEPTEMBER 2015





LEGEND

OU2 BOUNDARY

OU3 BOUNDARY

● Surface water location selected for sediment sample

● Surface water location not selected for sediment sample

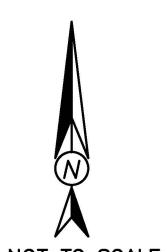


FIGURE 9
SEDIMENT
SAMPLE LOCATIONS

Prepared by: United Park City Mines Company
Reference: Resource & Environmental Management Consultants

JULY 2015

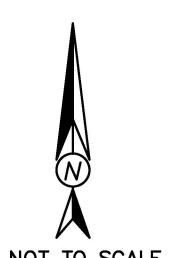
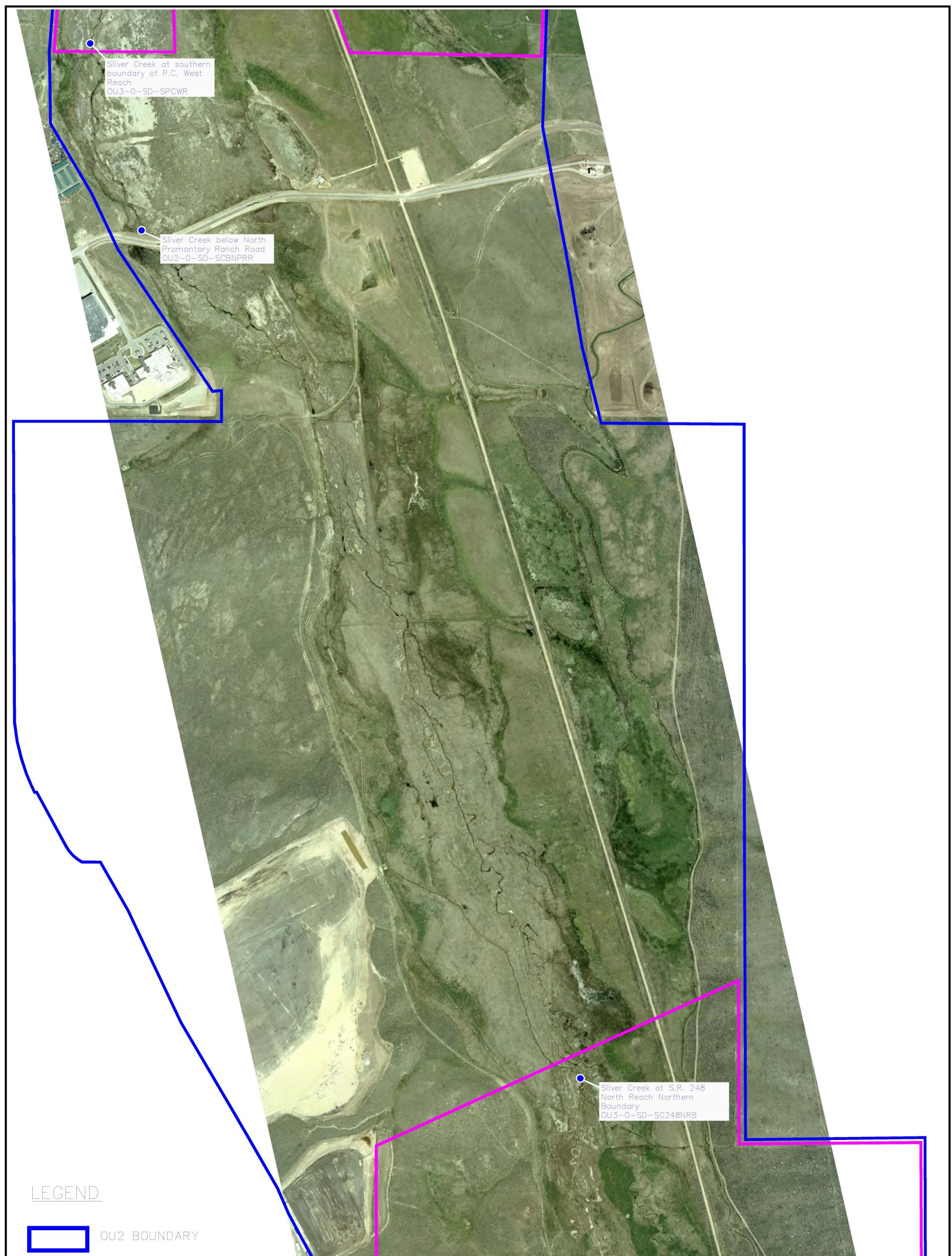
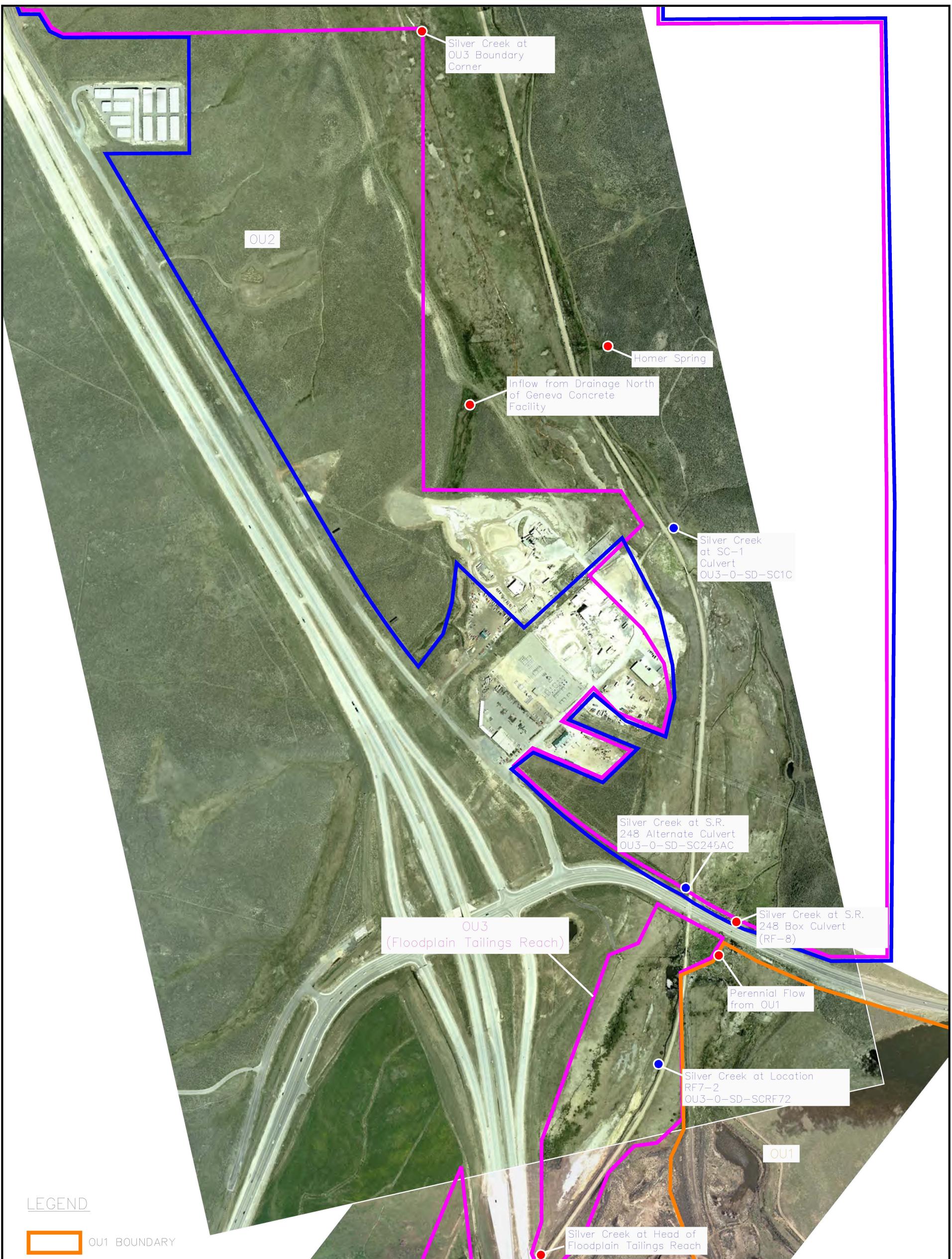


FIGURE 10
SEDIMENT
SAMPLE LOCATIONS

Prepared by: United Park City Mines Company
Reference: Resource & Environmental Management Consultants

JULY 2015



LEGEND

 OU1 BOUNDARY

 OU2 BOUNDARY

 OU3 BOUNDARY

● Surface water location selected for sediment sample

● Surface water location not selected for sediment sample

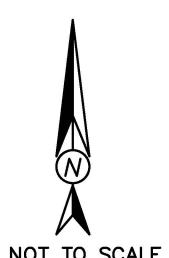


FIGURE 11
SEDIMENT SAMPLE LOCATIONS

Prepared by: United Park City Mines Company
Reference: Resource & Environmental Management Consultants

JULY 2015

LEGEND

 OU1 BOUNDARY

 OU3 BOUNDARY

 Surface water location selected for sediment sample

 Surface water location not selected for sediment sample

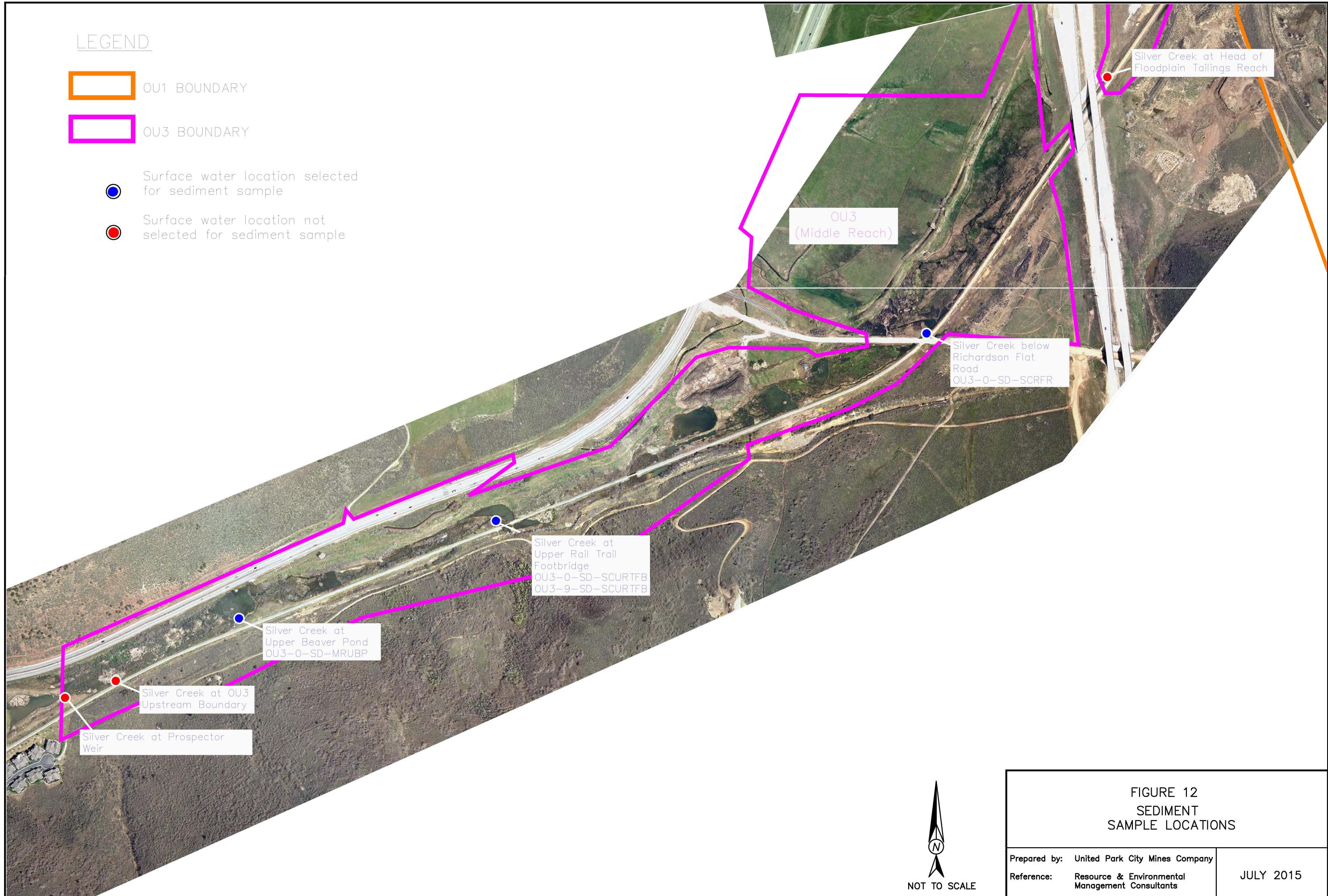
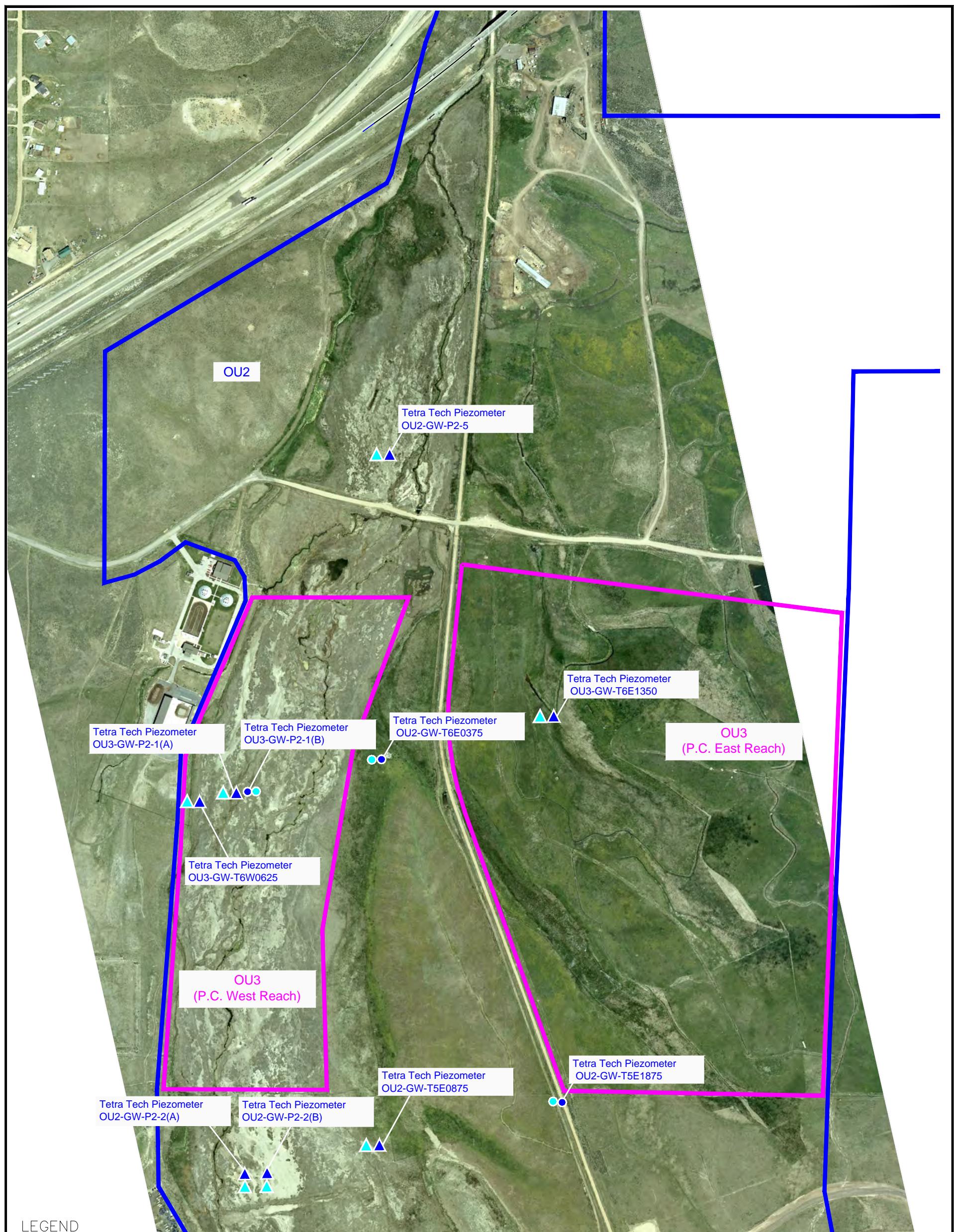


FIGURE 12
SEDIMENT
SAMPLE LOCATIONS

Prepared by: United Park City Mines Company
Reference: Resource & Environmental Management Consultants

JULY 2015

NOT TO SCALE



LEGEND

- OU2 BOUNDARY
- OU3 BOUNDARY

- ▲ PIEZOMETER SAMPLES COLLECTED IN AUGUST, 2015
- ▲ PIEZOMETER SAMPLES COLLECTED IN OCTOBER, 2015
- NO SAMPLES COLLECTED IN AUGUST, 2015
- NO SAMPLES COLLECTED IN OCTOBER, 2015

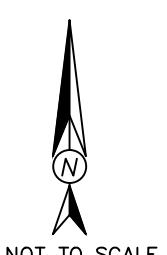
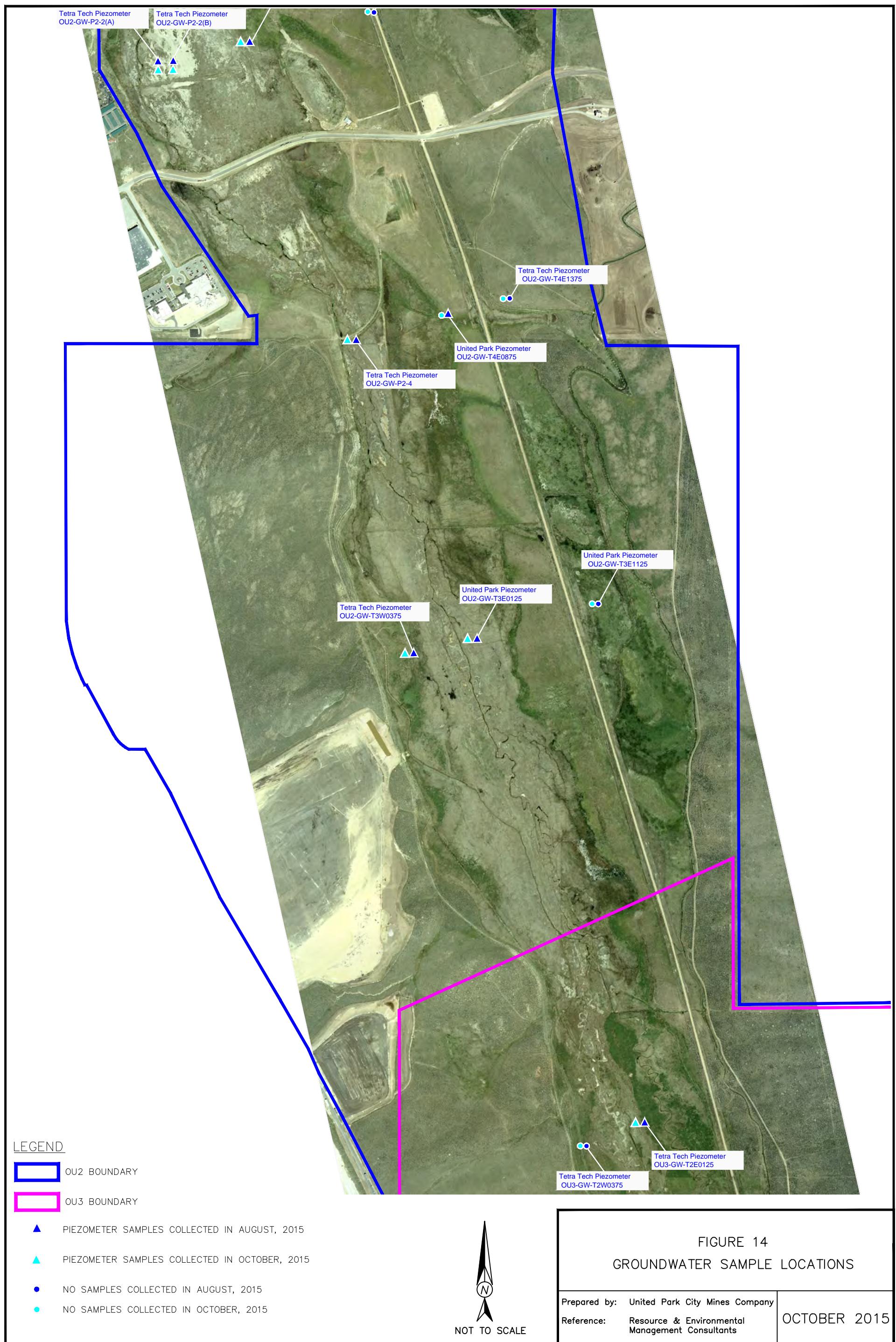
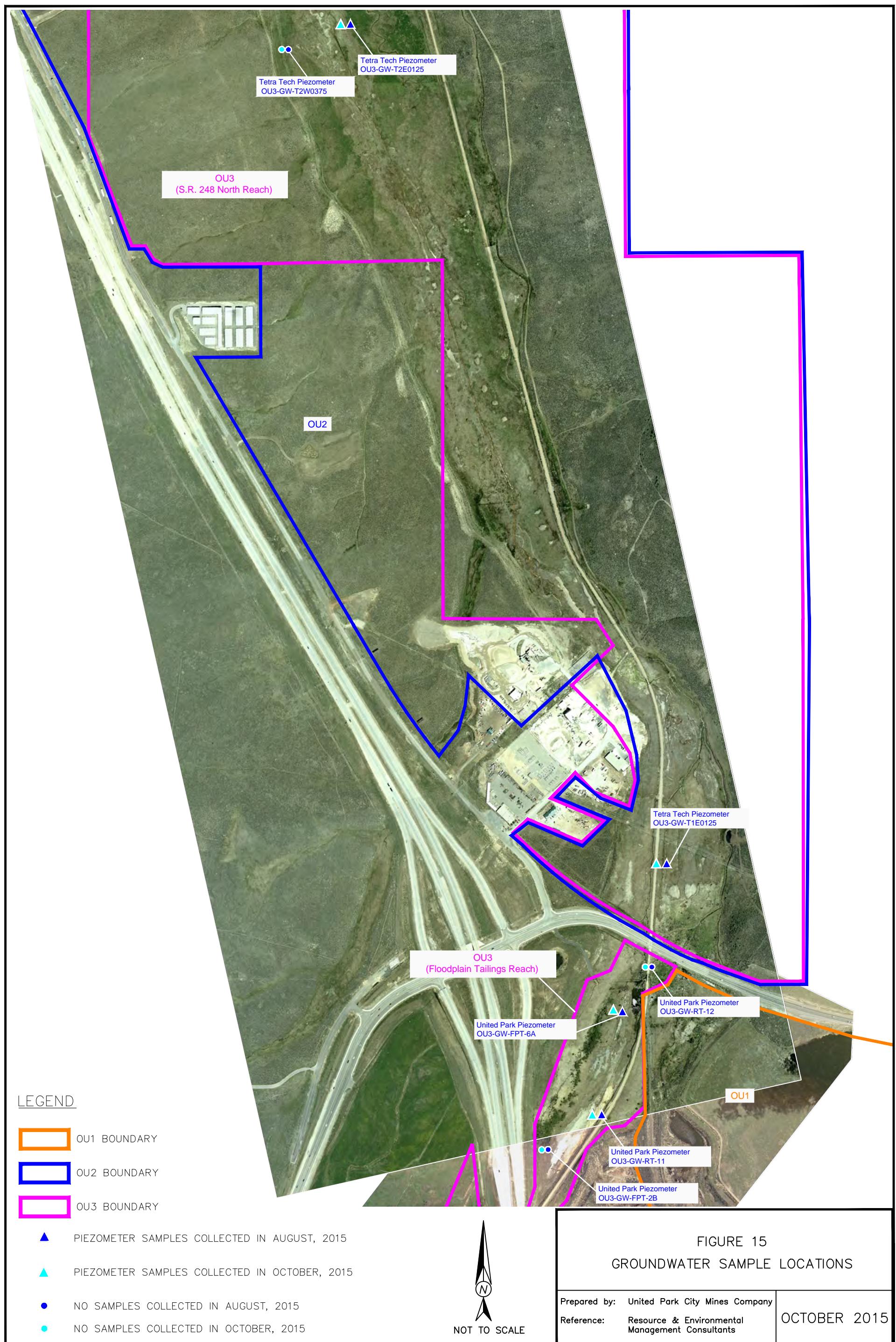


FIGURE 13
GROUNDWATER SAMPLE LOCATIONS

Prepared by: United Park City Mines Company
Reference: Resource & Environmental Management Consultants

OCTOBER 2015





LEGEND

OU1 BOUNDARY

OU3 BOUNDARY

▲ PIEZOMETER SAMPLES COLLECTED IN AUGUST, 2015

▲ PIEZOMETER SAMPLES COLLECTED IN OCTOBER, 2015

● NO SAMPLES COLLECTED IN AUGUST, 2015

● NO SAMPLES COLLECTED IN OCTOBER, 2015

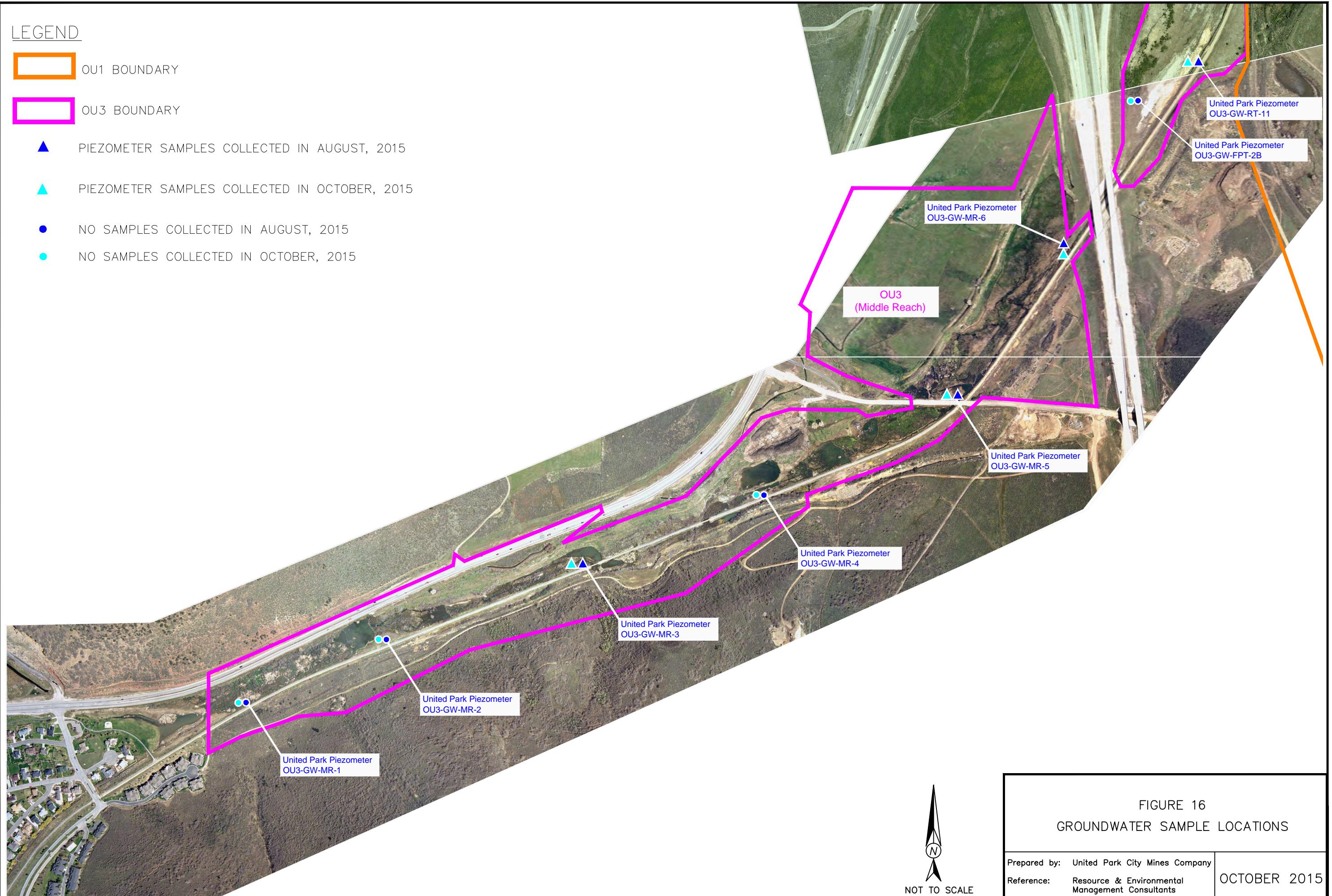
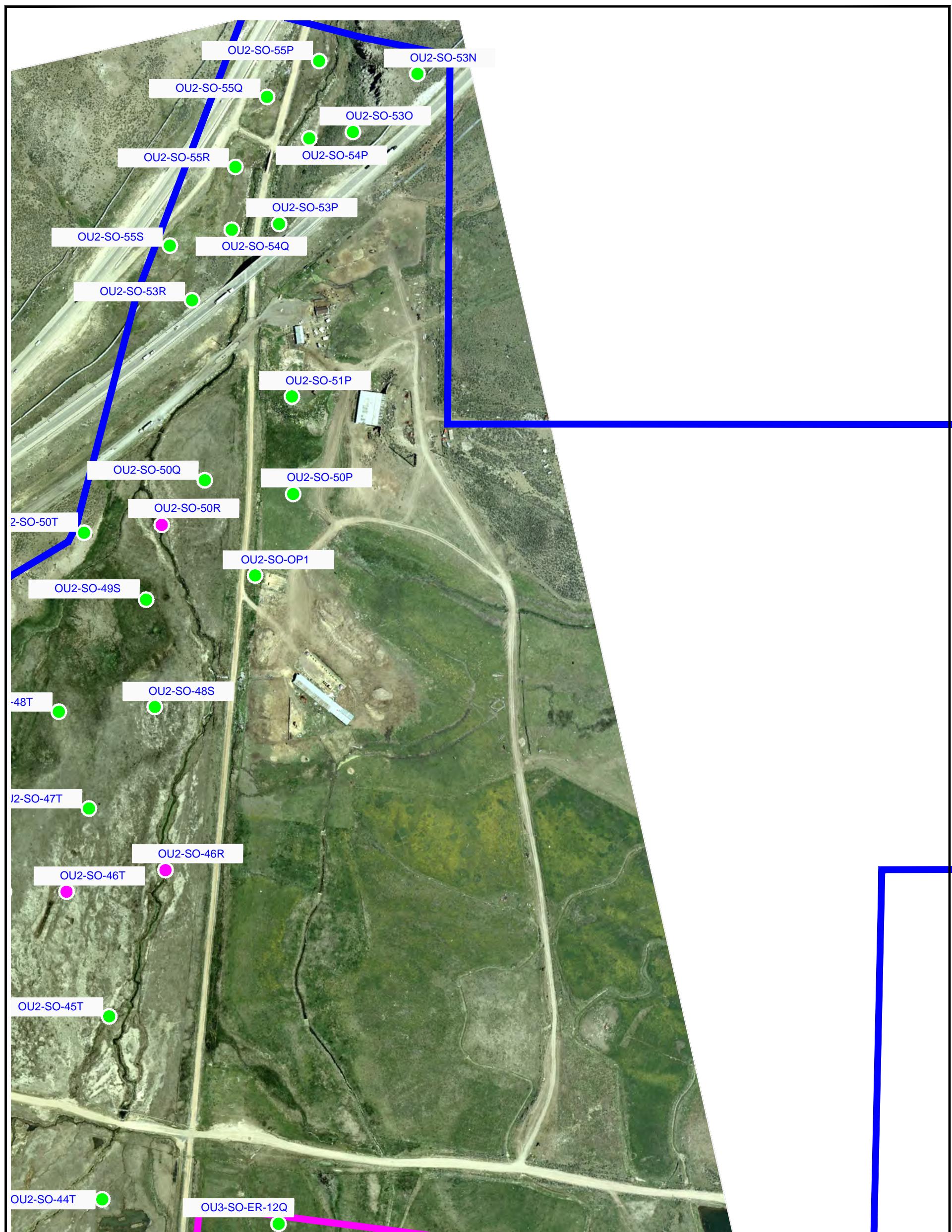


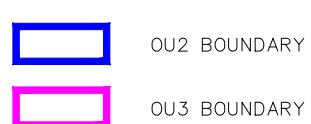
FIGURE 16
GROUNDWATER SAMPLE LOCATIONS

Prepared by: United Park City Mines Company
Reference: Resource & Environmental Management Consultants

OCTOBER 2015



LEGEND



- PREVIOUS TETRA TECH SURFACE SOIL SAMPLE LOCATION SAMPLED BY UNITED PARK CITY MINES
- UNITED PARK CITY MINES SOIL SAMPLING LOCATION

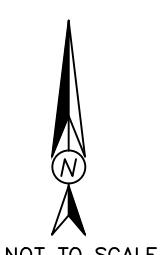
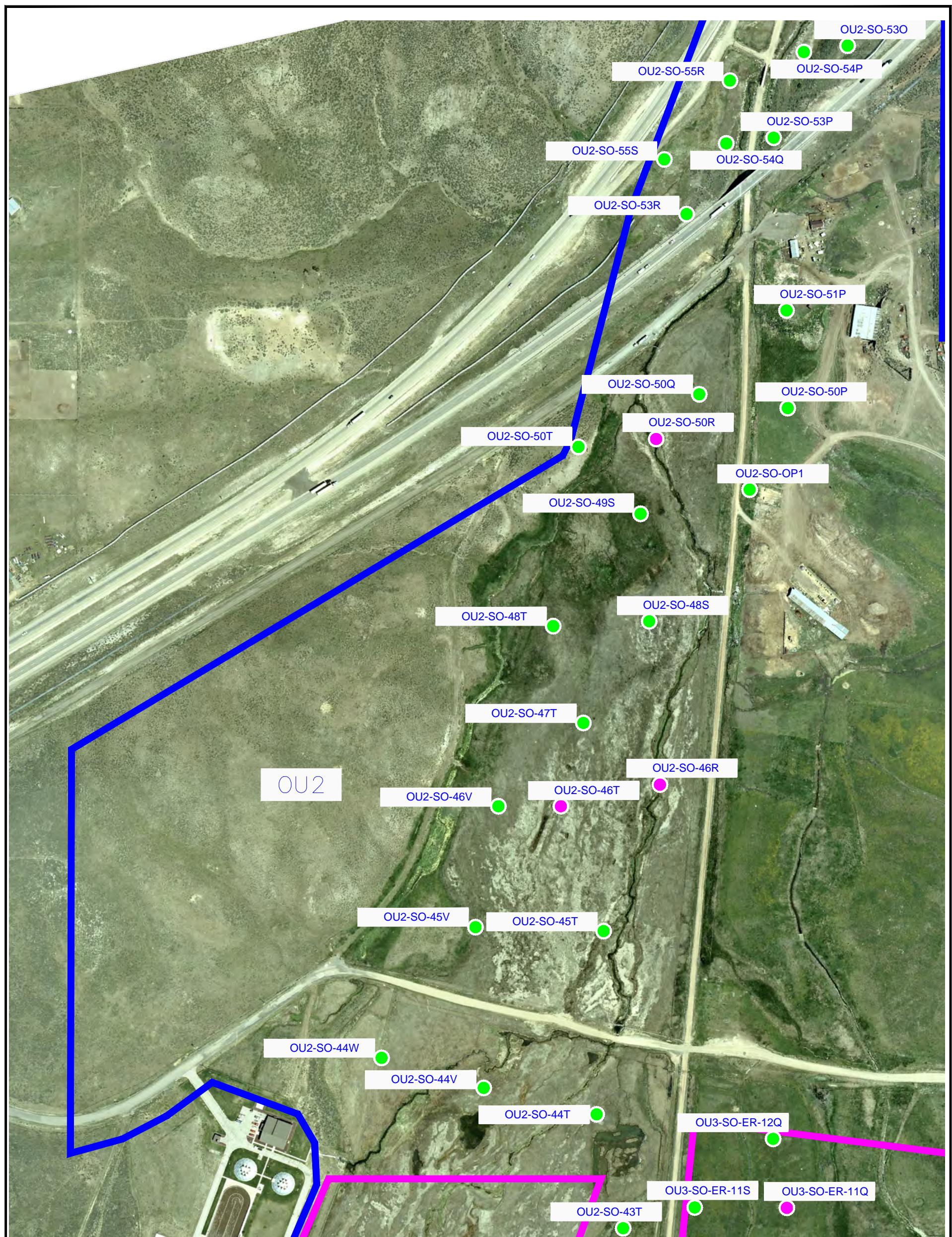


FIGURE 17
SOIL
SAMPLE LOCATIONS

Prepared by: United Park City Mines Company
Reference: Resource & Environmental Management Consultants

OCTOBER 2015



LEGEND

OU2 BOUNDARY

OU3 BOUNDARY

- PREVIOUS TETRA TECH SURFACE SOIL SAMPLE LOCATION SAMPLED BY UNITED PARK CITY MINES
- UNITED PARK CITY MINES SOIL SAMPLING LOCATION

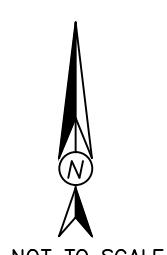


FIGURE 18
SOIL
SAMPLE LOCATIONS

Prepared by: United Park City Mines Company
Reference: Resource & Environmental Management Consultants

OCTOBER 2015

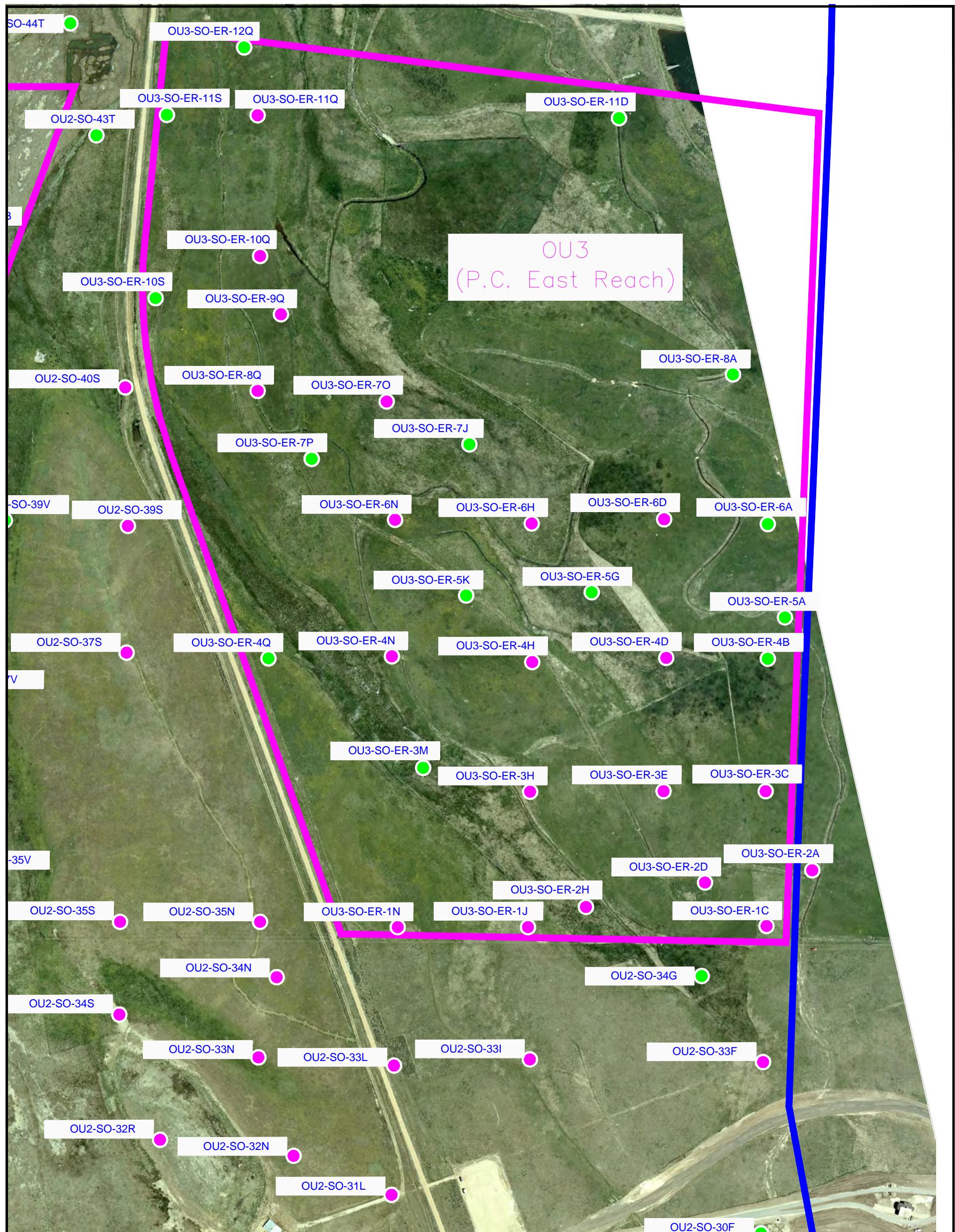
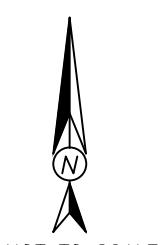
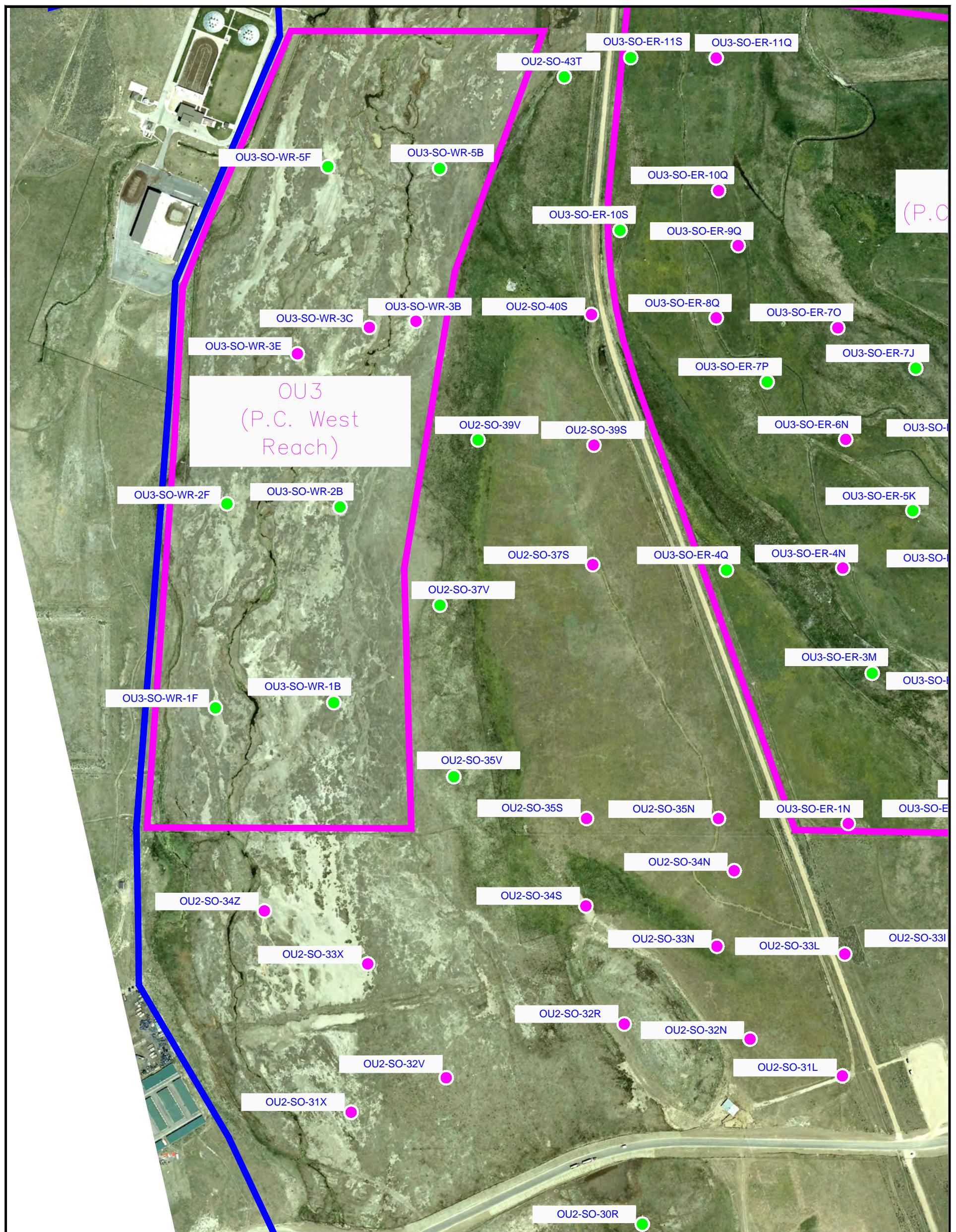


FIGURE 19
SOIL
SAMPLE LOCATIONS

Prepared by: United Park City Mines Company
Reference: Resource & Environmental Management Consultants

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LEGEND

- OU2 BOUNDARY
- OU3 BOUNDARY
- PREVIOUS TETRA TECH SURFACE SOIL SAMPLE LOCATION SAMPLED BY UNITED PARK CITY MINES
- UNITED PARK CITY MINES SOIL SAMPLING LOCATION

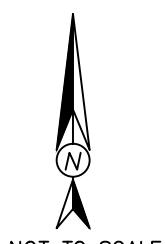
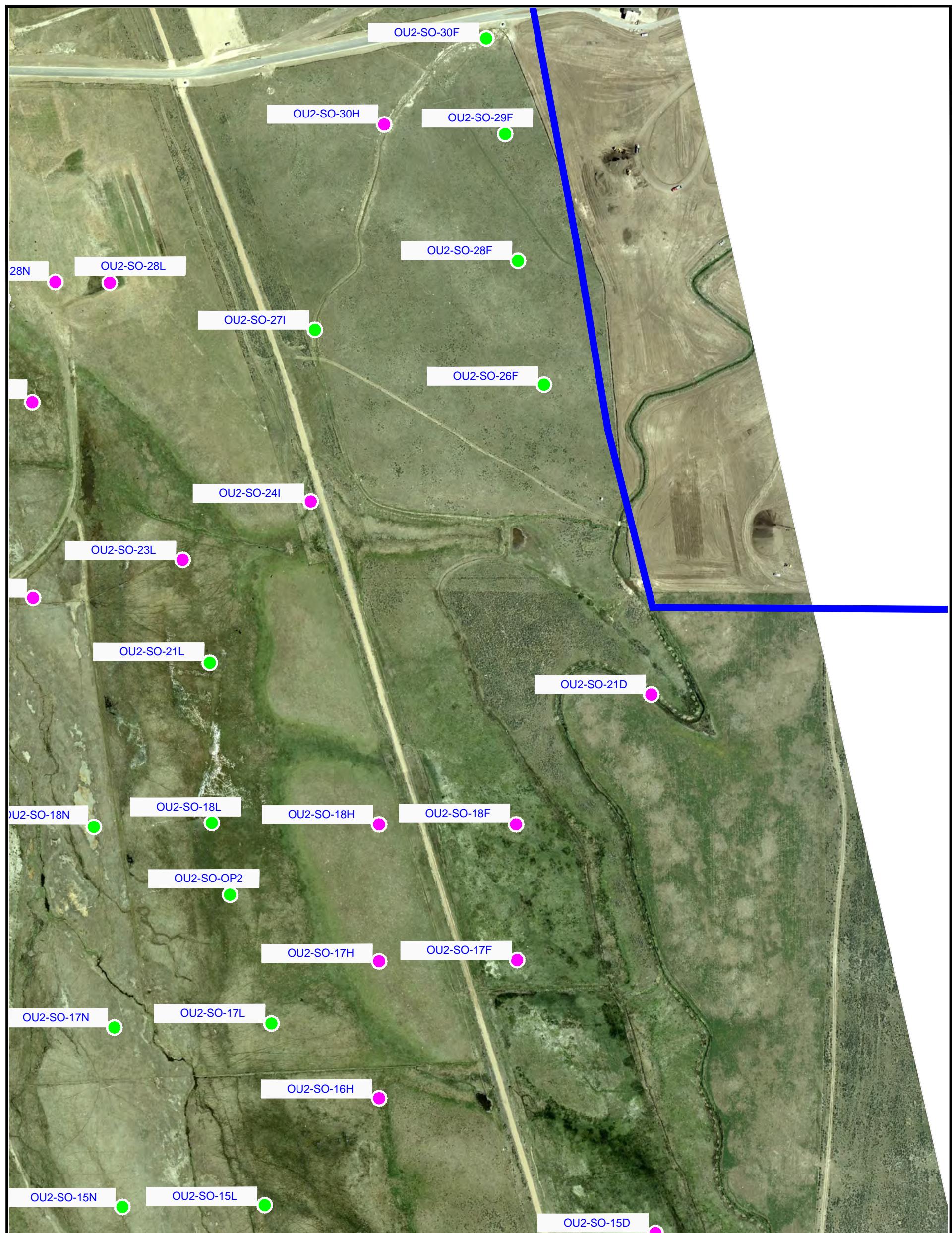


FIGURE 20
SOIL
SAMPLE LOCATIONS

Prepared by: United Park City Mines Company
Reference: Resource & Environmental Management Consultants

OCTOBER 2015



LEGEND

- OU2 BOUNDARY
- PREVIOUS TETRA TECH SURFACE SOIL SAMPLE LOCATION SAMPLED BY UNITED PARK CITY MINES
- UNITED PARK CITY MINES SOIL SAMPLING LOCATION

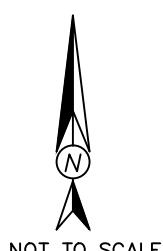
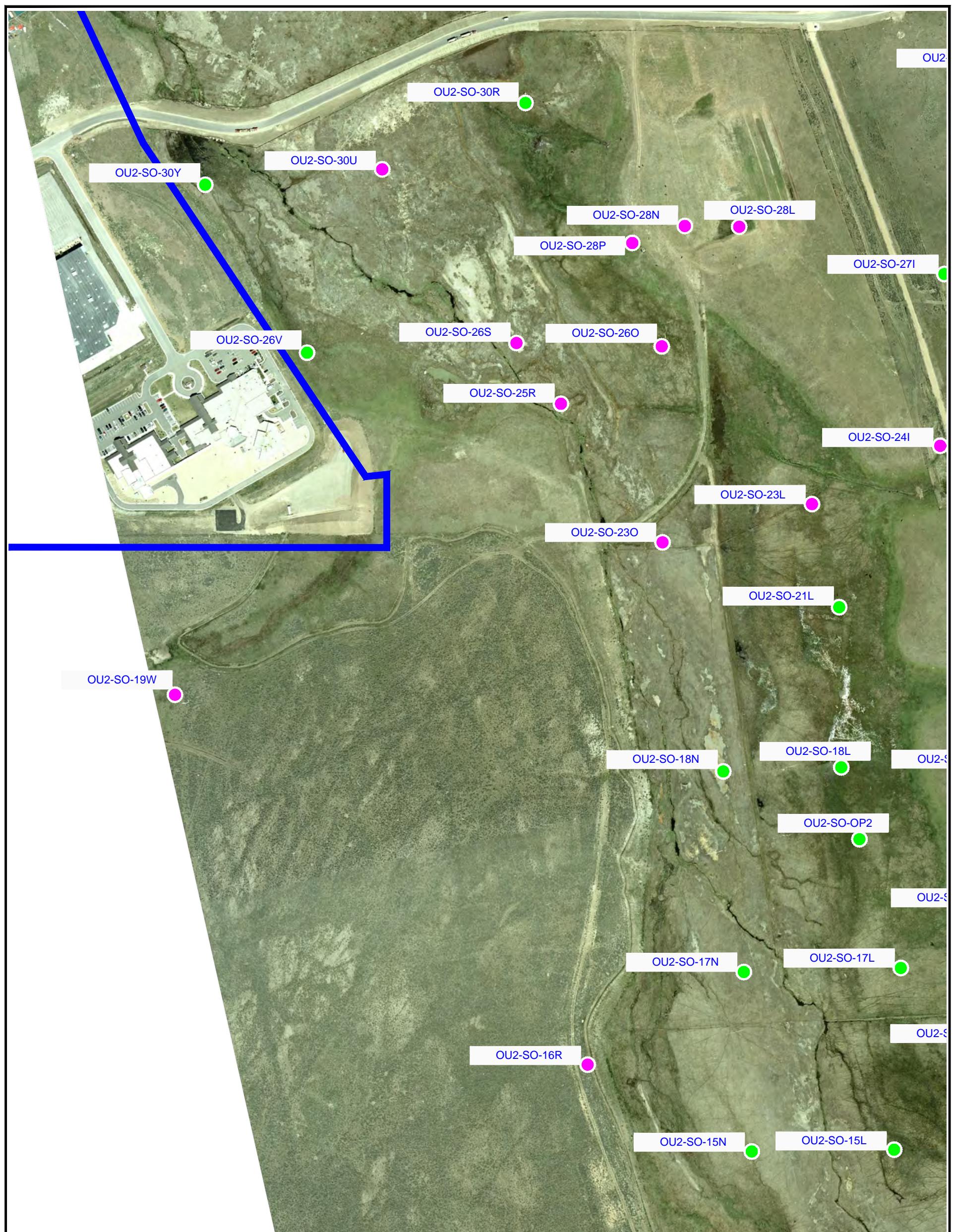


FIGURE 21
SOIL
SAMPLE LOCATIONS

Prepared by: United Park City Mines Company
Reference: Resource & Environmental Management Consultants

OCTOBER 2015



LEGEND

- OU2 BOUNDARY
- PREVIOUS TETRA TECH SURFACE SOIL SAMPLE LOCATION SAMPLED BY UNITED PARK CITY MINES
- UNITED PARK CITY MINES SOIL SAMPLING LOCATION

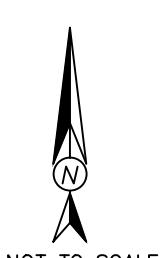
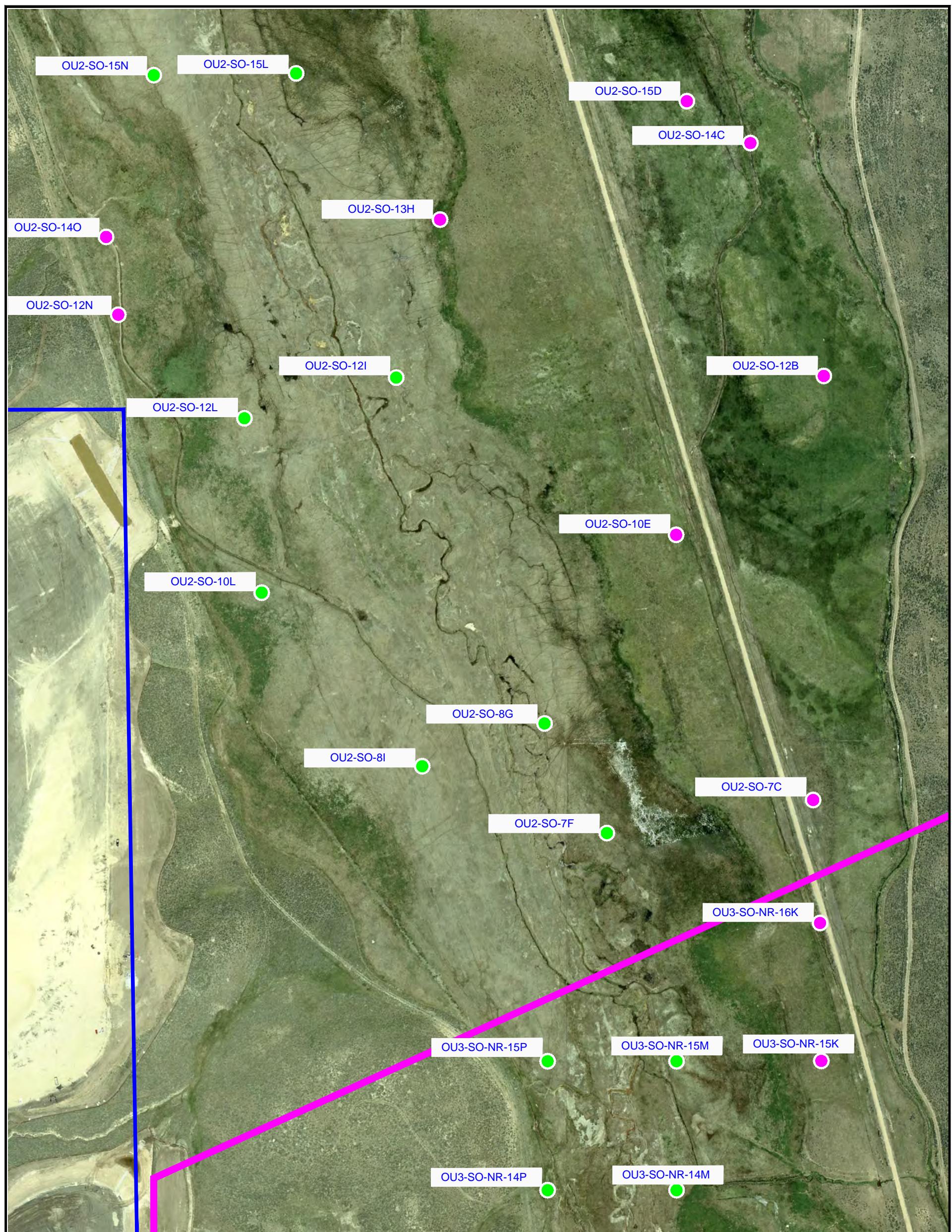


FIGURE 22
SOIL
SAMPLE LOCATIONS

Prepared by: United Park City Mines Company
Reference: Resource & Environmental Management Consultants

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LEGEND

- OU2 BOUNDARY
- OU3 BOUNDARY
- PREVIOUS TETRA TECH SURFACE SOIL SAMPLE LOCATION SAMPLED BY UNITED PARK CITY MINES
- UNITED PARK CITY MINES SOIL SAMPLING LOCATION

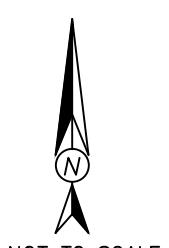
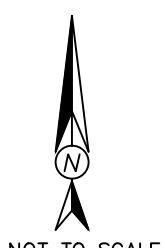
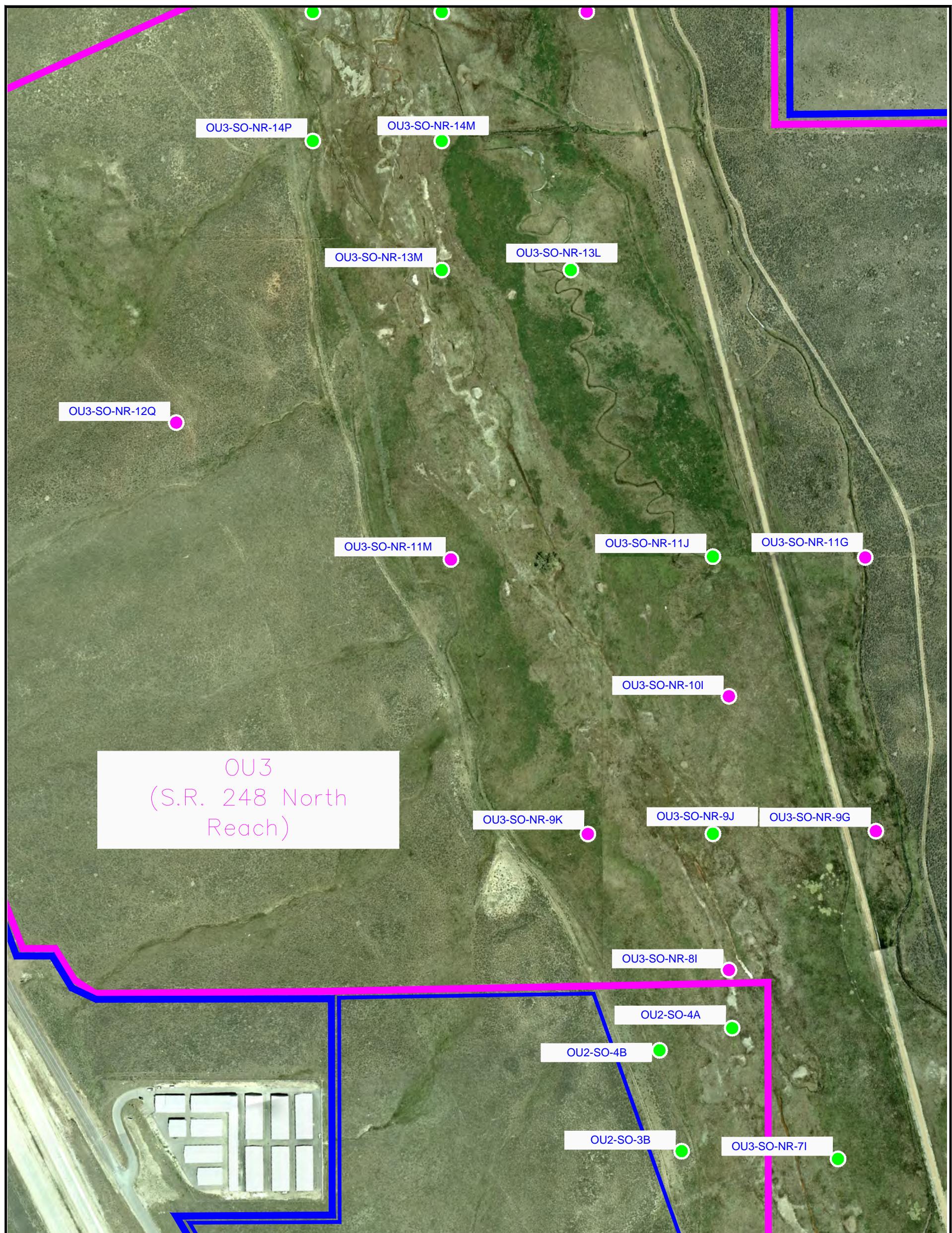


FIGURE 23
SOIL
SAMPLE LOCATIONS

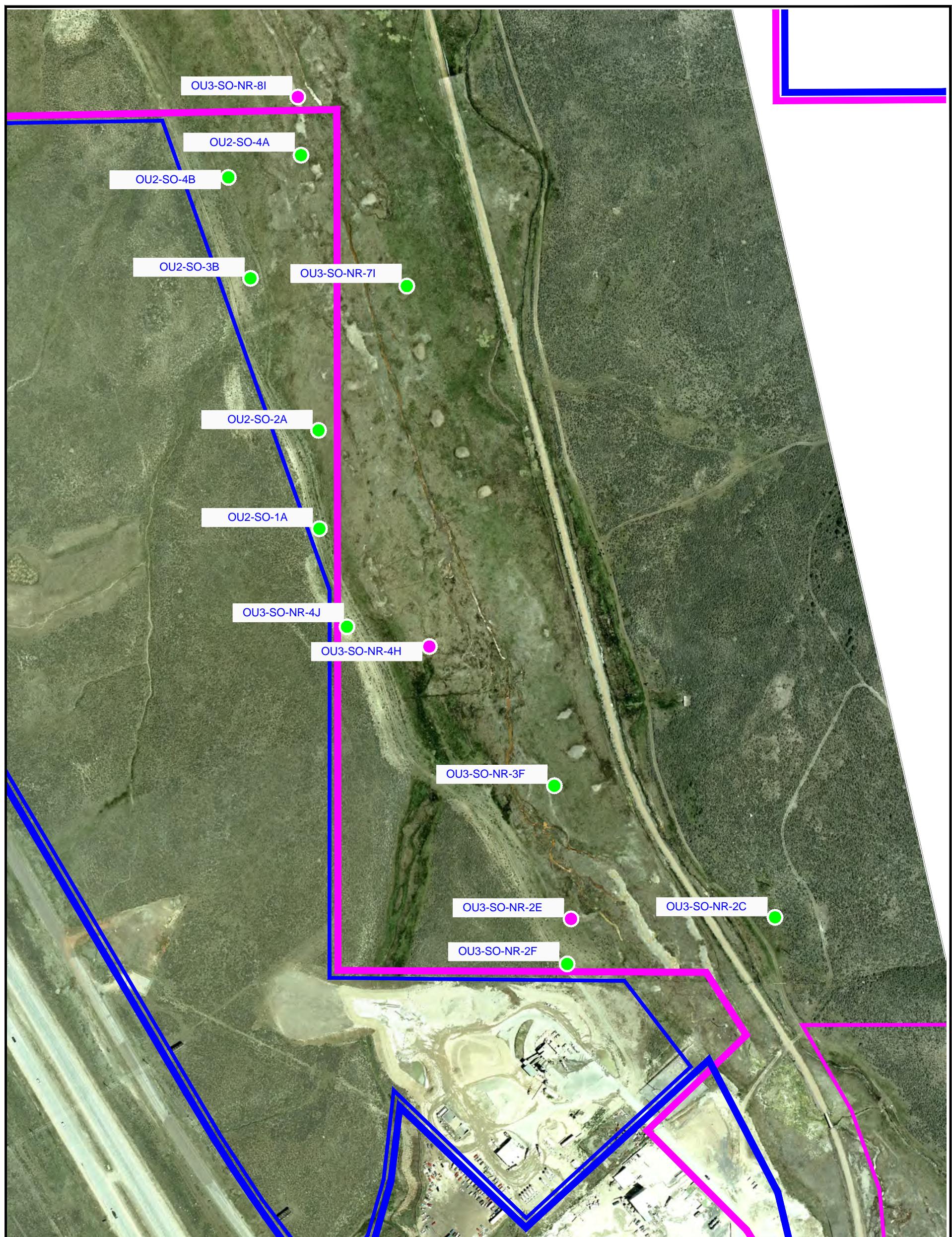
Prepared by: United Park City Mines Company
Reference: Resource & Environmental Management Consultants

OCTOBER 2015



Prepared by: United Park City Mines Company
Reference: Resource & Environmental Management Consultants

OCTOBER 2015



LEGEND

- [Blue Box] OU2 BOUNDARY
- [Magenta Box] OU3 BOUNDARY
- (Pink Circle) PREVIOUS TETRA TECH SURFACE SOIL SAMPLE LOCATION SAMPLED BY UNITED PARK CITY MINES
- (Green Circle) UNITED PARK CITY MINES SOIL SAMPLING LOCATION

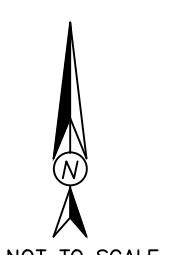
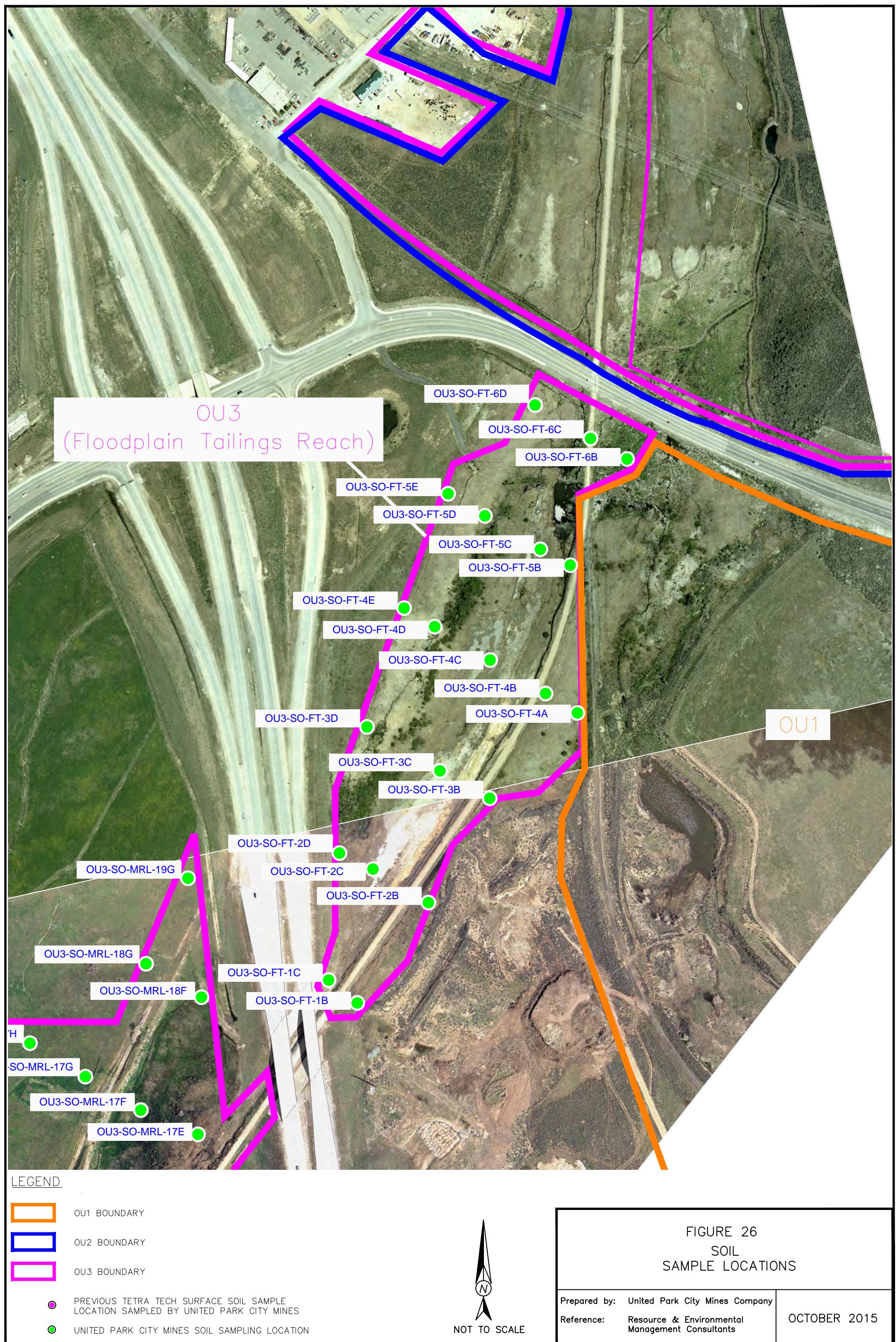
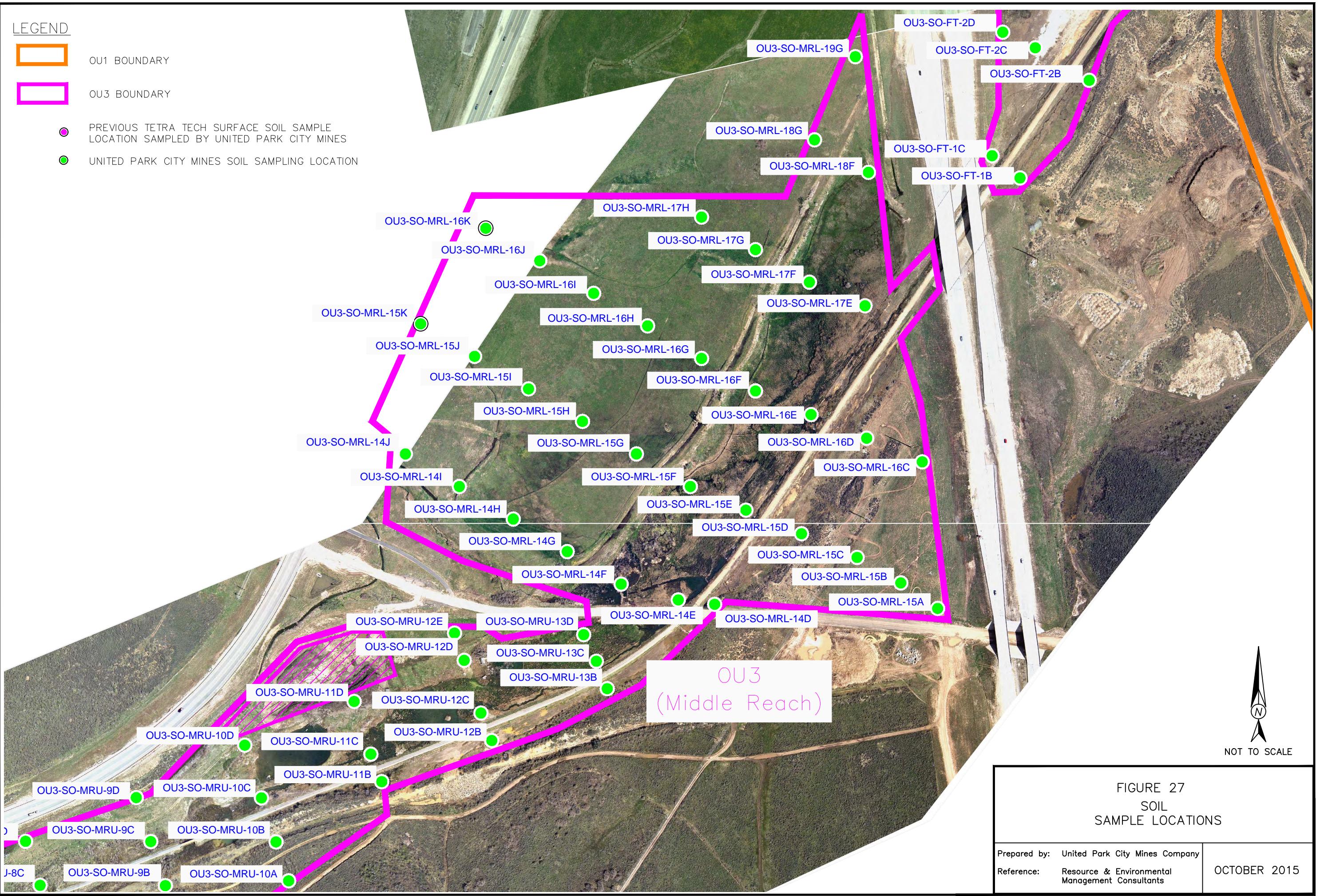


FIGURE 25
SOIL
SAMPLE LOCATIONS

Prepared by:	United Park City Mines Company
Reference:	Resource & Environmental Management Consultants
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LEGEND

OU3 BOUNDARY

- PREVIOUS TETRA TECH SURFACE SOIL SAMPLE LOCATION SAMPLED BY UNITED PARK CITY MINES
- UNITED PARK CITY MINES SOIL SAMPLING LOCATION

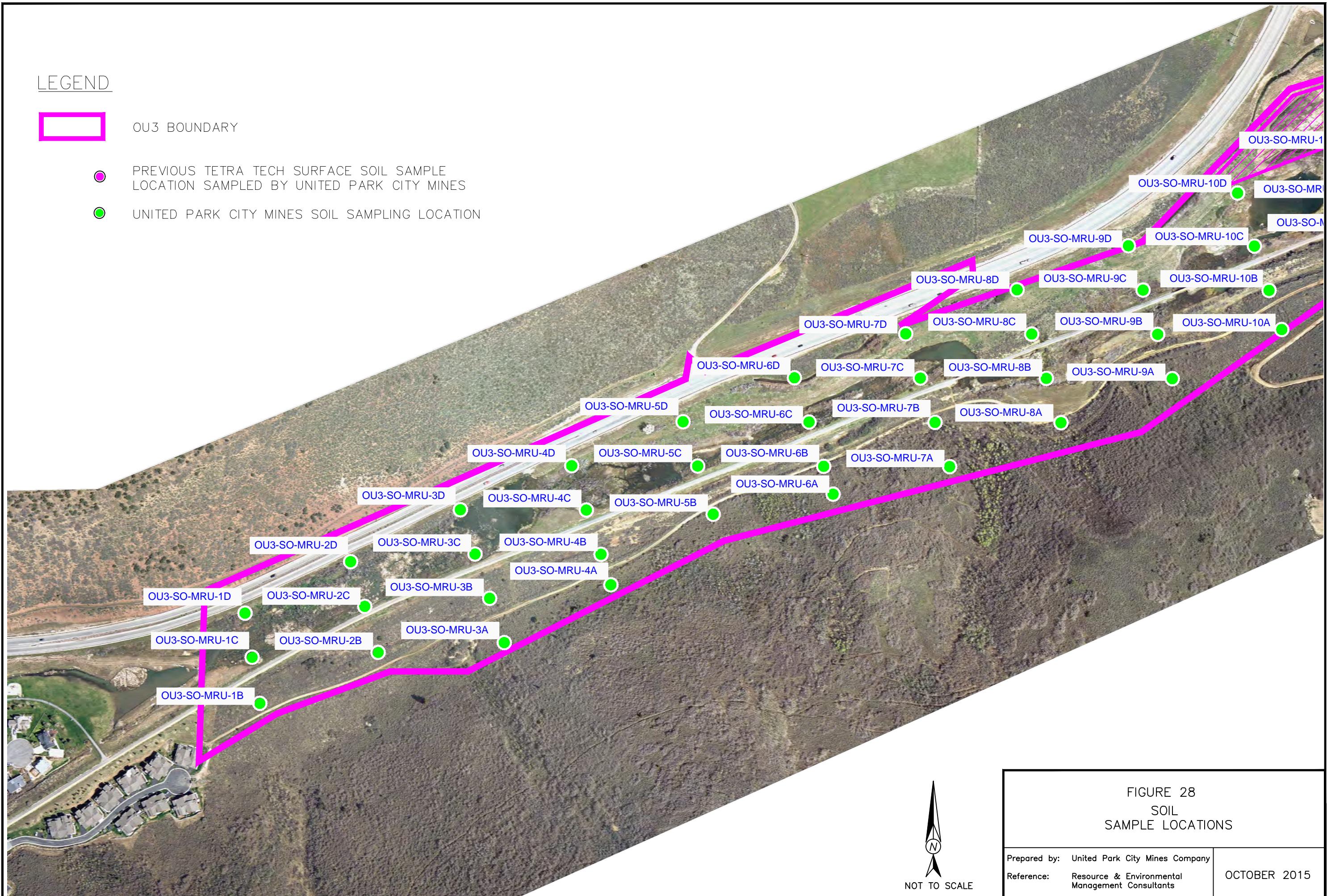
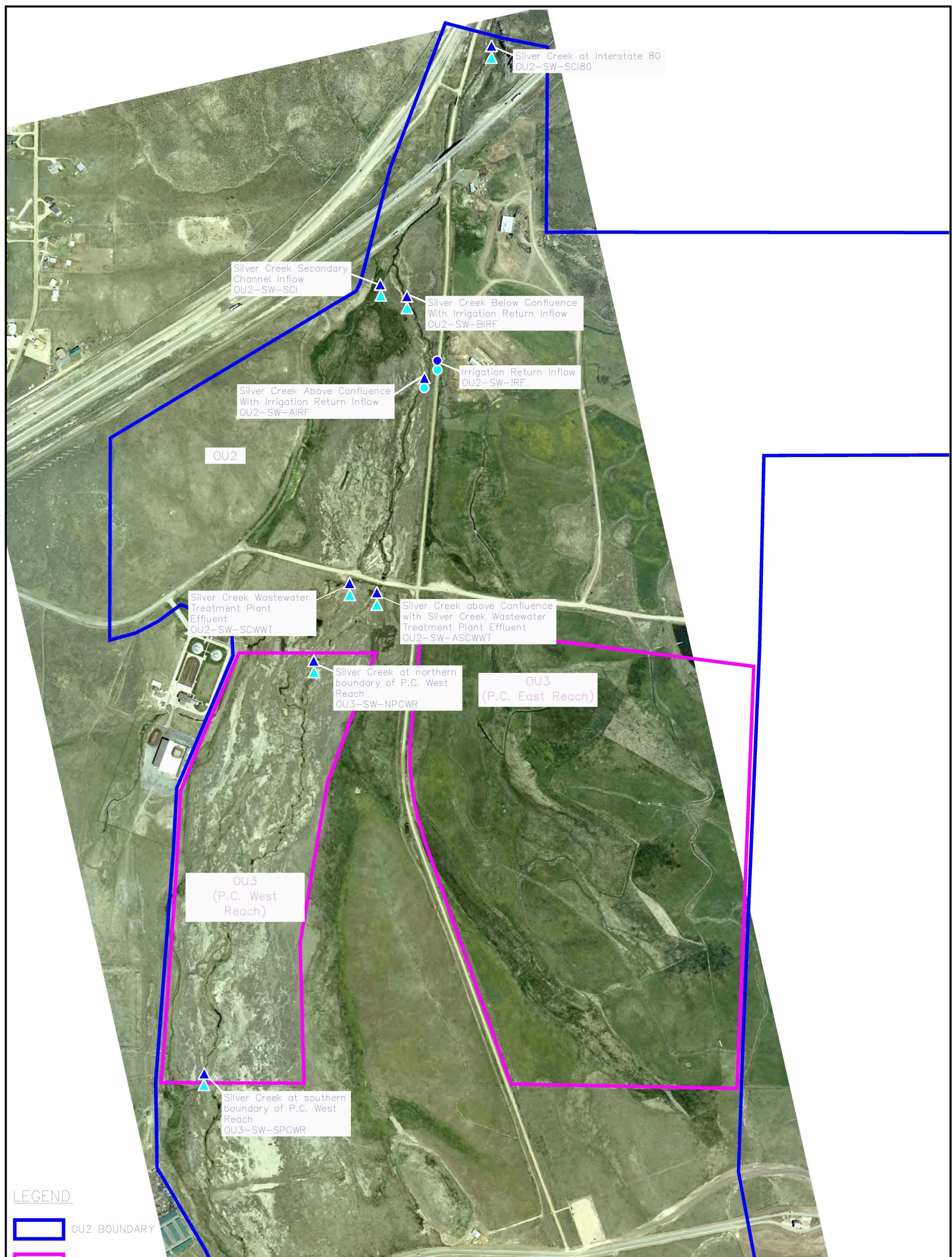


FIGURE 28
SOIL
SAMPLE LOCATIONS

Prepared by: United Park City Mines Company
Reference: Resource & Environmental Management Consultants

OCTOBER 2015



- ▲ SAMPLES COLLECTED IN AUGUST OR SEPTEMBER, 2015
- ▲ SAMPLES COLLECTED IN OCTOBER, 2015
- NO SAMPLES COLLECTED IN AUGUST OR SEPTEMBER, 2015
- NO SAMPLES COLLECTED IN OCTOBER, 2015

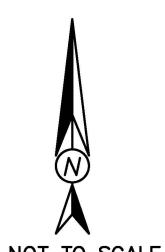


FIGURE 29
SURFACE WATER SAMPLE LOCATIONS

Prepared by: United Park City Mines Company
Reference: Resource & Environmental Management Consultants

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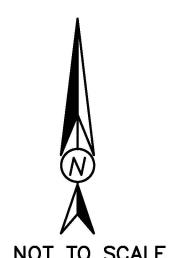
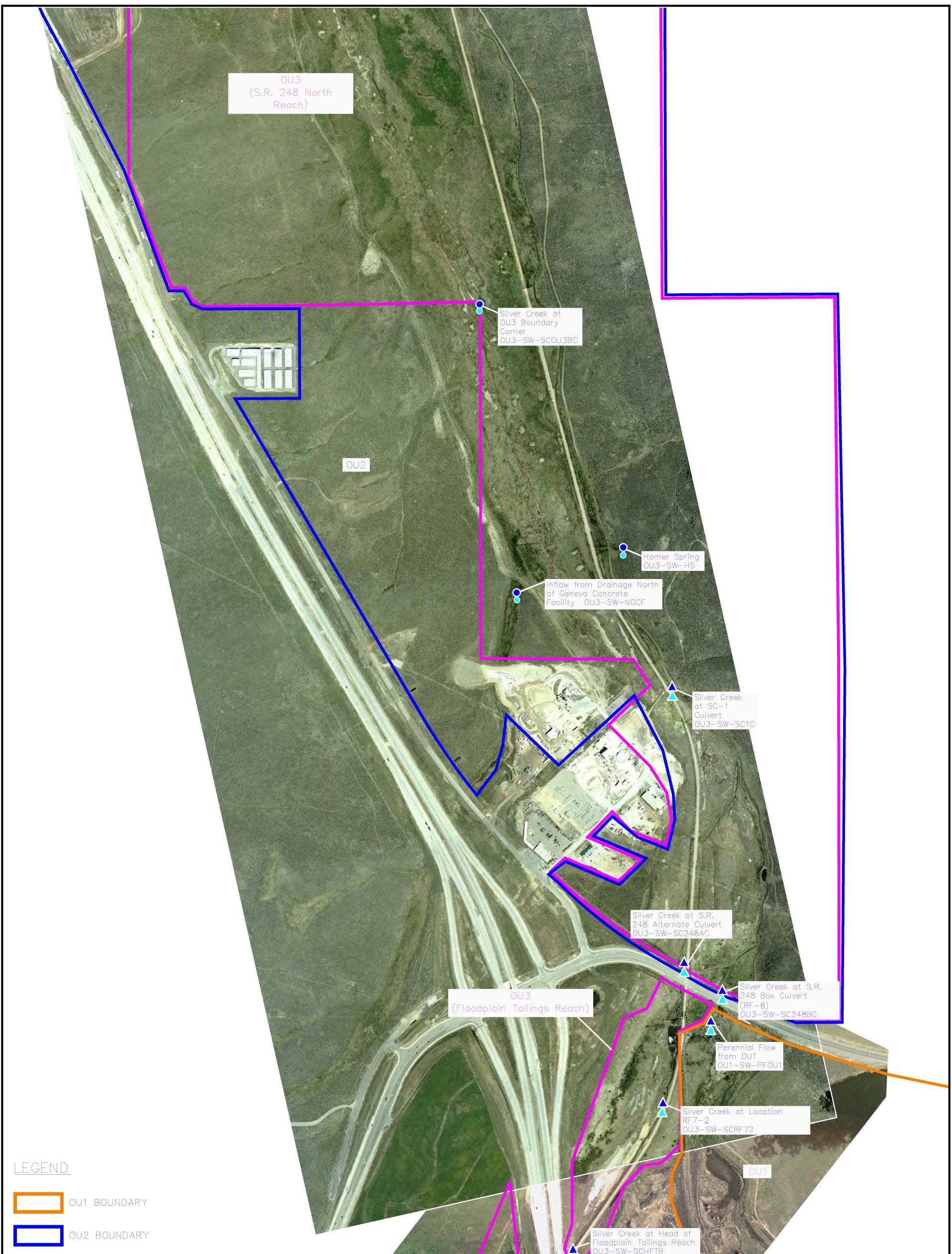


FIGURE 31
SURFACE WATER SAMPLE LOCATIONS

Prepared by: United Park City Mines Company
Reference: Resource & Environmental Management Consultants

OCTOBER 2015

LEGEND

OU1 BOUNDARY

OU3 BOUNDARY

▲ SAMPLES COLLECTED IN AUGUST OR SEPTEMBER, 2015

▲ SAMPLES COLLECTED IN OCTOBER, 2015

● NO SAMPLES COLLECTED IN AUGUST OR SEPTEMBER, 2015

● NO SAMPLES COLLECTED IN OCTOBER, 2015

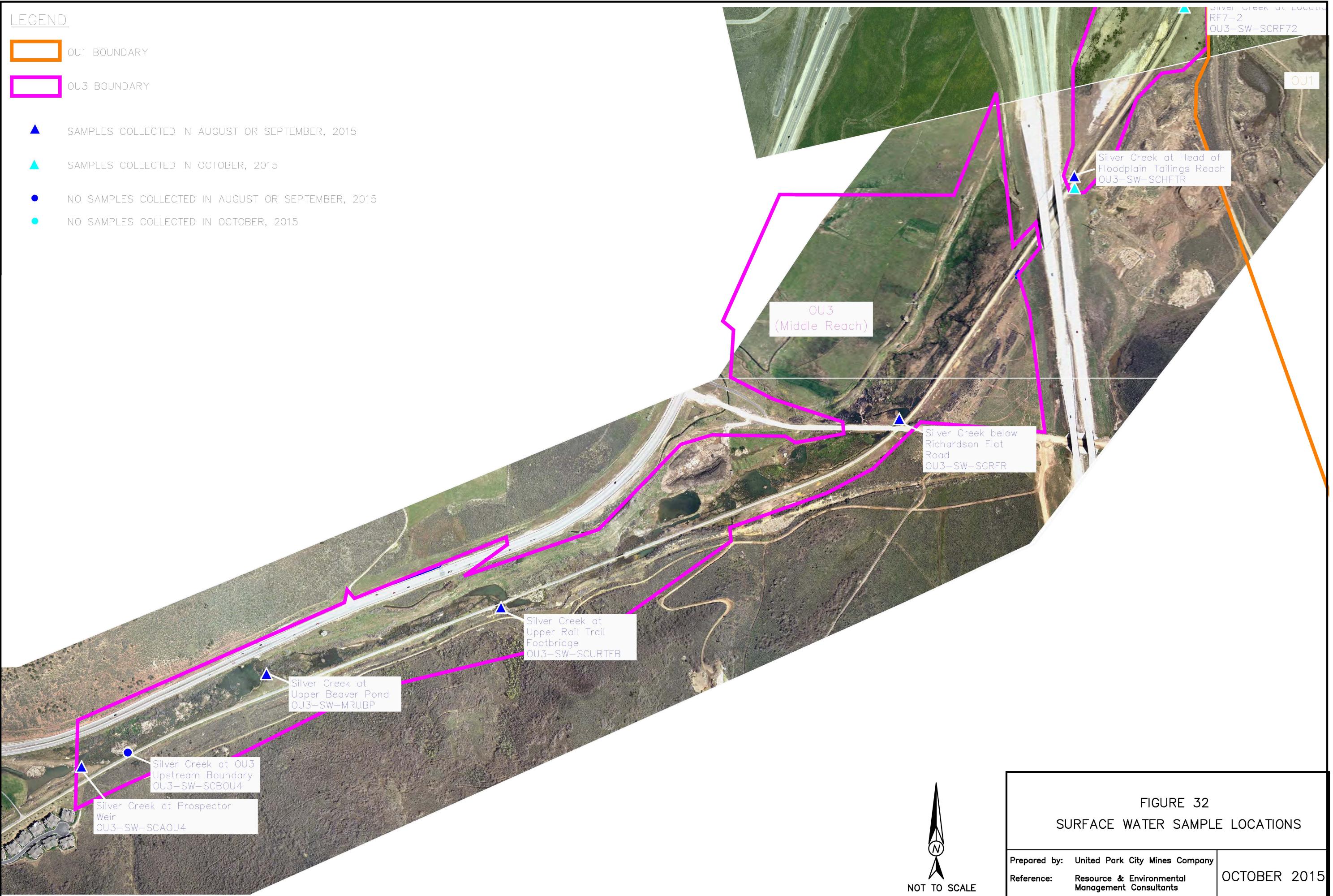


FIGURE 32
SURFACE WATER SAMPLE LOCATIONS

Prepared by: United Park City Mines Company

Reference: Resource & Environmental Management Consultants

OCTOBER 2015

N
NOT TO SCALE

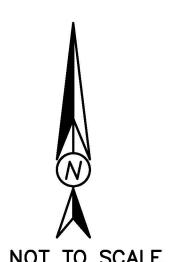
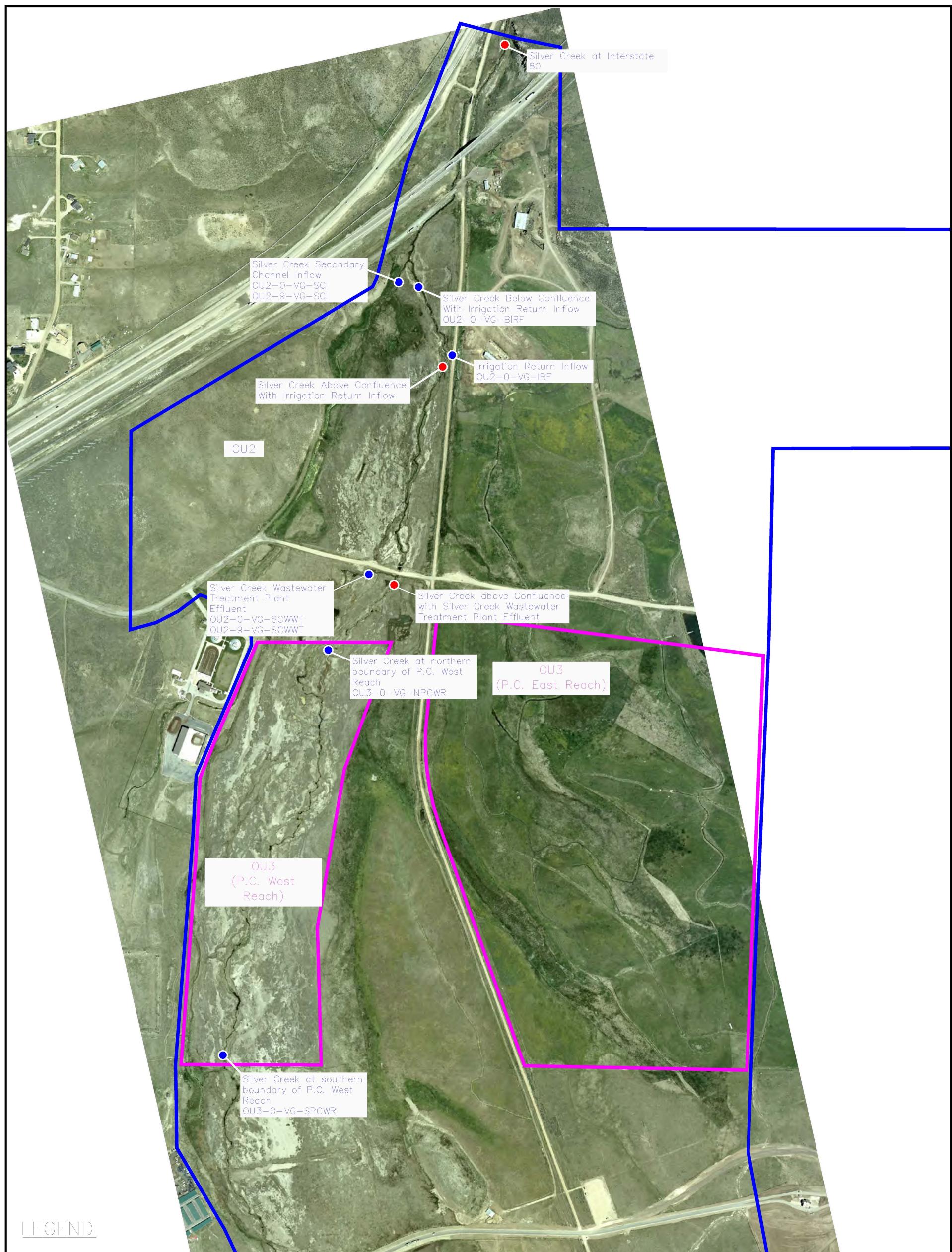
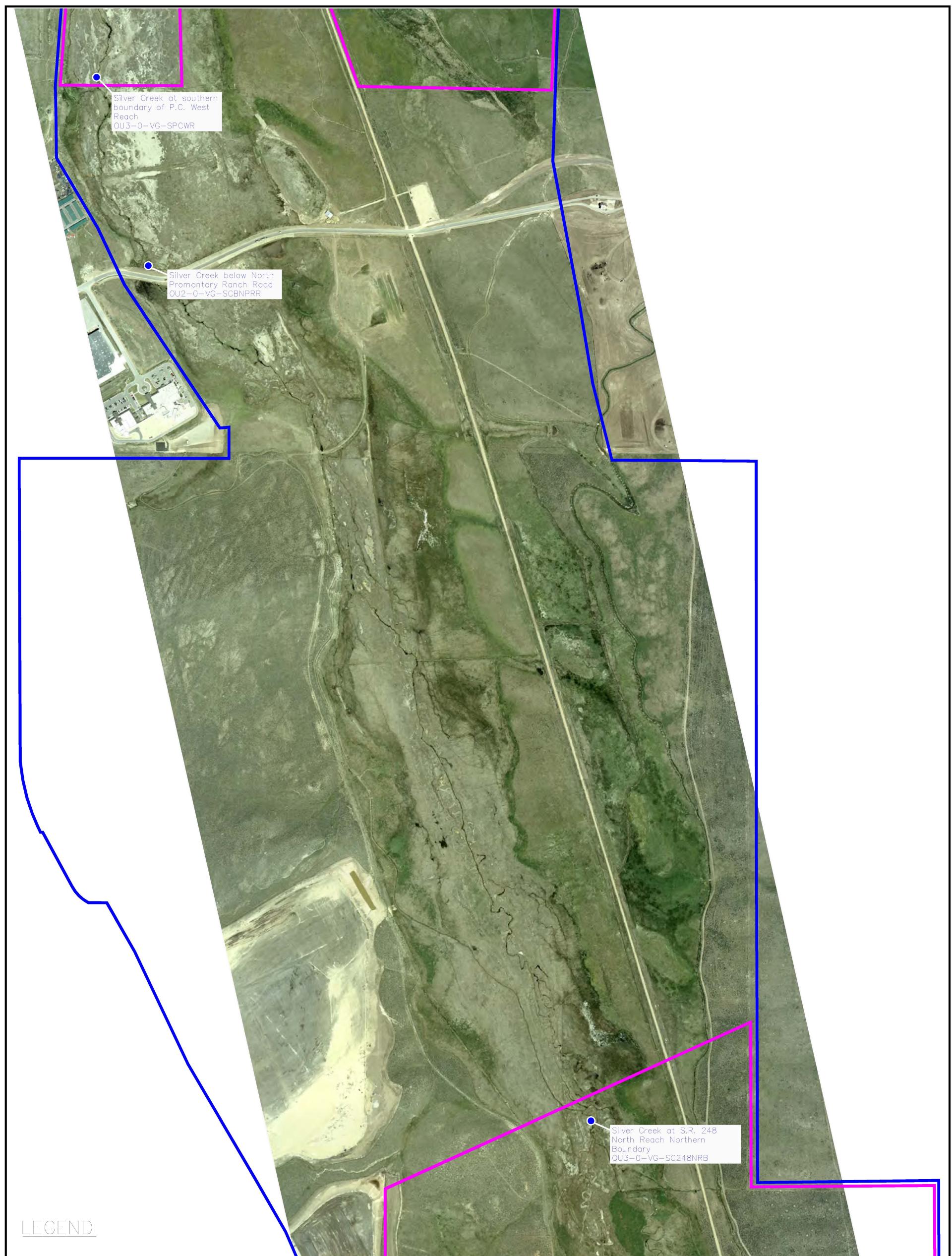


FIGURE 33
VEGETATION
SAMPLE LOCATIONS

Prepared by: United Park City Mines Company
Reference: Resource & Environmental Management Consultants

JULY 2015



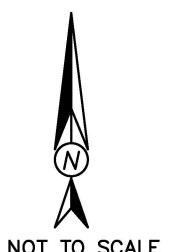
LEGEND

OU2 BOUNDARY

OU3 BOUNDARY

Surface water location selected for vegetation sample

Surface water location not selected for vegetation sample



NOT TO SCALE

FIGURE 34
VEGETATION
SAMPLE LOCATIONS

Prepared by: United Park City Mines Company
Reference: Resource & Environmental Management Consultants

JULY 2015

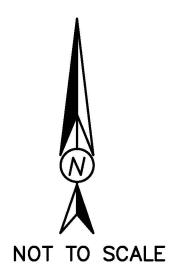
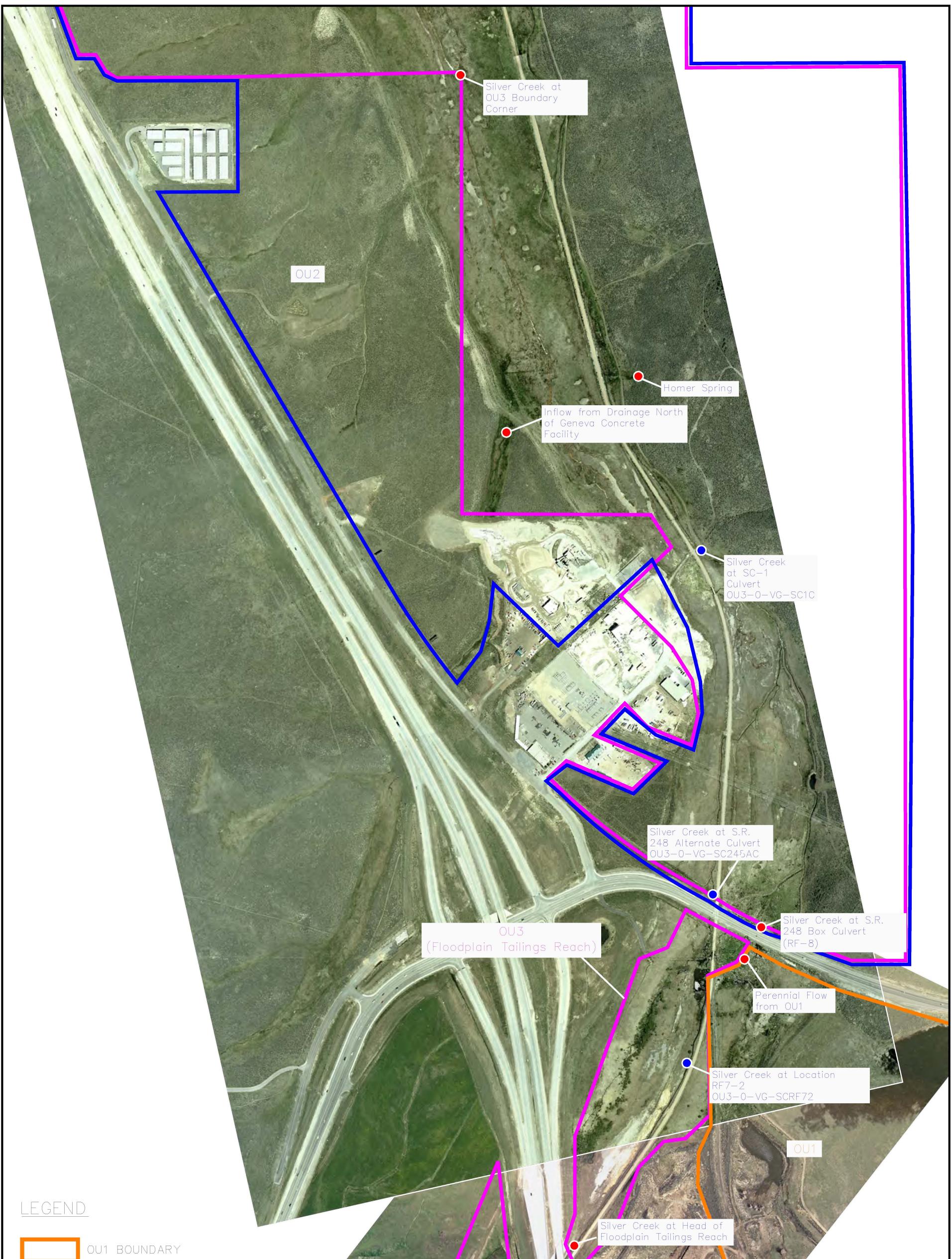


FIGURE 35
VEGETATION
SAMPLE LOCATIONS

Prepared by: United Park City Mines Company
Reference: Resource & Environmental Management Consultants

JULY 2015

LEGEND

OU1 BOUNDARY

OU2 BOUNDARY

OU3 BOUNDARY

Surface water location selected
for vegetation sample

Surface water location not
selected for vegetation sample

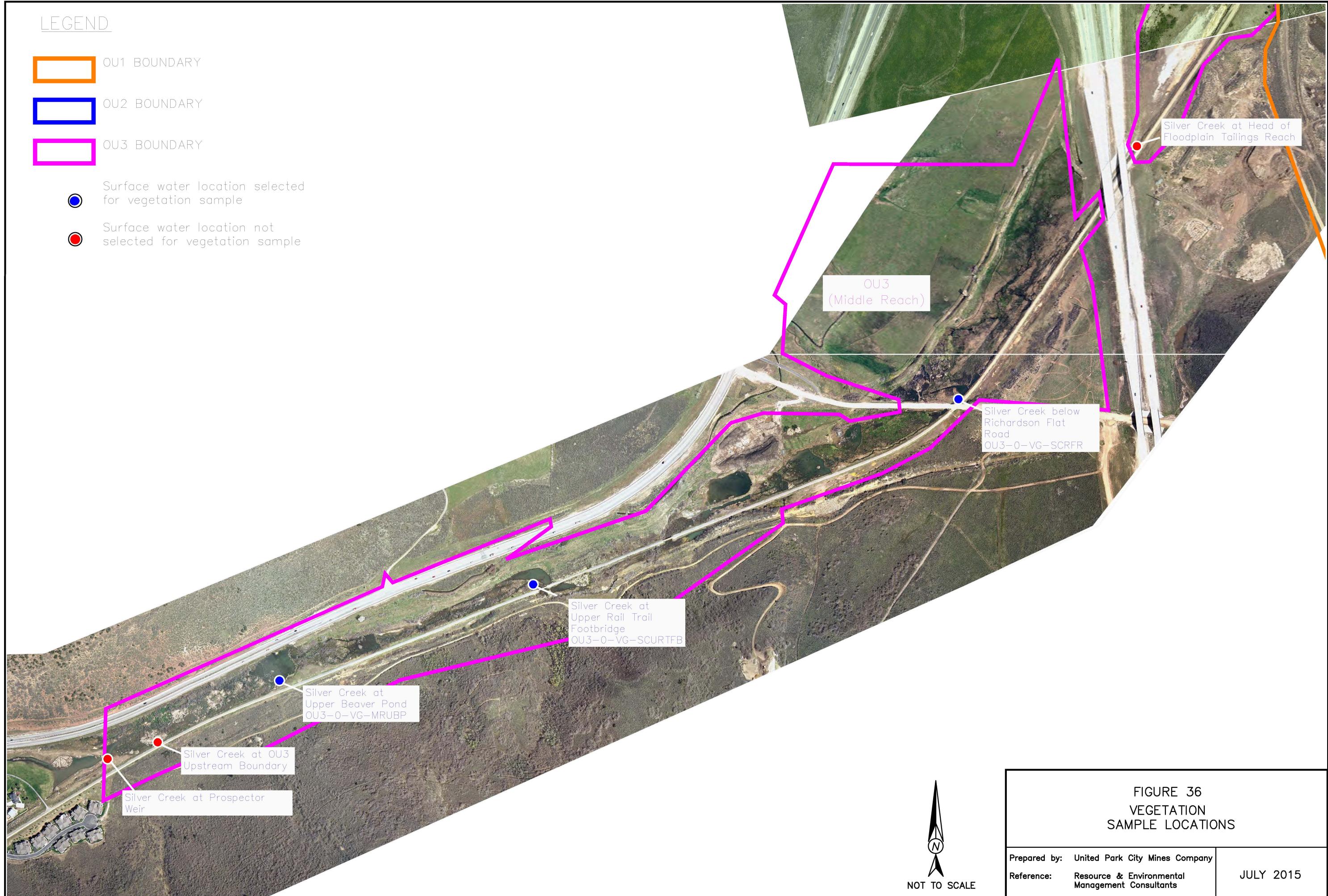


FIGURE 36
VEGETATION
SAMPLE LOCATIONS

Prepared by: United Park City Mines Company
Reference: Resource & Environmental Management Consultants

JULY 2015